Oleg GRITSKEVITCH

[Gritskevich]

Hydro-Magnetic Generator

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Gritskevitch's Hydro-Magnetic Dynamo

by

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[*Editorial*: The article presents construction and operation of Oleg V. Gritskevitch's hydro-magnetic dynamo, which is an example of a vary powerful new energy system. The prototype in Armenia has produced over 1500 KW power during several years.

The author was born on 14 August 1936 and grew up in Vladivostok, Russia He is married and has a son Boris. Gritskevitch is a physicist by education. He worked in the Far-East branch of the USSR Academy of Sciences. He ahs more than 70 patents on inventions ranging from household engineering up to high technologies, which he has been trying to apply in our country and met big difficulties. After numerous attempts to receive the patents the author was convinced that the outflow of the information occurred. Therefore he has received the state certificates as on know-how (on a French way of patenting) for all his inventions. -- A. Frolov]

Introduction

During the Institute for New Energy 1999 Symposium, I lectured on my hydro-magnetic dynamo. This paper is my attempt to explain the construction and operation of my dynamo.

To fool investigators of my secrets, I have an occasion to provide misleading information. For example, the drawing accompanying the Russian patent referenced below shows a cylinder across the toroid to fool readers. He real dynamo only has the toroid without the cylinder. Even its name 'hydro-magnetic dynamo' is somewhat deliberately misleading.

I have some familiarity with the new energy field. Nearly all purported new energy devices are fairly small electrical generators. The dynamo may be the only new electrical generator which most nearly meets all the requirements of an ideal large-scaled electrical generator. My dynamo really is the single most valuable invention the world has ever known.

Alexander V. Frolov of St Petersburg recommended me to contact with Dr Patrick Bailey, Institute for New Energy since Pat has lots of contacts who could possibly help me with patenting my invention of a new source of energy in USA.

I conducted the work on the theory and creation of the electrostatic generator-converter 'hydro-magnetic dynamo' about 20 years (See dynamo history below). He first primitive equipment was created when I worked in Academy of Sciences. During that time various changes were introduced in the generator and in the theory of its work. It is now possible to manufacture, install, and apply it in industry.

For the first time I made the public report on this work in 1991 on a symposium in Volgodonsk city. The report received the positive replies and reviews of the experts of a nuclear industry in USSR. The same year I was accepted in international Nuclear Society. In these years I offered development of this technology to different state bodies and private enterprises. But there was the only answer: 'It is very interesting and perspective project, but there is no money for it'.

At the end of 8 years I tried to transfer this technology in US through the embassy in Moscow. The former ambassador of USR the Dr J. Matlock knows about it. He wanted to meet me, but in that time there were forces which have not given to carry out my plans. Thus I came to the conclusion to look out other possible investors. I am ready to consider any offers on cooperation: joint patenting, sale of know-how, creation of joint venture, etc. I have 70 Russian patents including the following:

Engine for marine courts and torpedoes without any mechanics;
Reactors-converters of chemical elements;
Rocket-torpedo without any mechanics;
Weapon systems without firing pin;
Metal powders made electrodes;
Oil separation method. Separation of any fraction (liquid, rigid);
Electrostatic disintegrator;
Rigid elements based plasmatron. New Heat sources;
Steam boiler based on Runk effect;
Refrigerators based on electrohydraulic effect;
Springless shock absorber;
Energy roof for apartment houses; and other patents.

Dynamo History

The beginning for this project came as a conclusion from one popular Russian magazine article (Tehnika Molodiozhi; Youth;s Technique, 1972, #8, August) by A. Kaldamasov, entitled "Spheroidal Lightning in a Liquid". This article came to the attention of Michail Razovsky and

me in 1974. My group of volunteers and enthusiasts was looking for a new source of energy. This article serves as a start-up point for the understanding of chemical-physical processes occurring in water. In 1976-78, in the Vladivostok city hospital, in the radiological lab, me and others (Vladilen Bulgakov, radiology physician, and Michail Razovsky, theoretician in plasma physics field) spent one year assembling a device, which was supposed to separate water into oxygen and hydrogen more efficiently. During the experiments, instead of the expected results, it produced electricity very efficiently! The input power during the experiment was 800 watt water pump. The output was 1400 watts. This device was assembled using plastic pipes connected with hoses, where the water was circulating in a loop. Further this led to the idea of creating the second device as generator-toroid.

The second generator was assembled in the workshop of the Ocean Research Institute in Vladivostok, and it was transported in the summer of 1990 to the testing station of the Ministry of Electronics Industry in Vladivostok. This lab was well-equipped with all necessary sets of instruments. At the same time patents were filed in the USSR State Committee of Inventions. In the spring of 1991 the State Commission, led by Yurii Lebedev, the Russian Federation Council of Ministers arrived in Vladivostok. This commission arrived for two reasons: To recommend a financial request for manufacturing the dynamo, and to classify this energy source as a 'Discovery' (Document #14-451).

After the next change in Russian government the financing for the project was terminated. The first article on the dynamo was published in the Russian magazine Tehnika Molodyozhi #3 (March 1990), page 17, entitled 'Innovators Ideas'.

Several Armenian physicists, after reading the article, sent me a letter requesting to meet with me in Vladivostok for negotiations about the dynamo. The arrived in March 1991 and made observations of the second generator., which was in working condition at that time. I flew to Armenia, and the work on the third generator started at the end of 1991. It was completed at the end of 1992. It was working and was producing energy until January 1997, when it was destroyed during the war. Some people were also killed and other people further moved to the USA. This version of the dynamo created an output averaging 6,800 amperes at 220 volts DC. Its input power was only approximately 1% of the output power.

Then I was an invited speaker of the Meeting of the Alternative Energy Institute (Dr Hal Fox) in Salt Lake City, August 1999. I want to note that the official announcement about my speech had several mistakes (for example, the name of Armenia was changed to Romania).

Dynamo Theory

My hydro-magnetic dynamo is a large-scaled emission-free electrical generator, which does not require external fueling. The dynamo is capable to power larger transportation vehicles such as buses, trucks, ships, locomotives, and airplanes. Doubt remains about making dynamos compact enough to power automobiles.

While three experimental prototypes have been built with Russian and Armenian expertise and equipment, a fourth demonstration prototype needs to be built with more modern Western

engineering expertise and equipment to verify dynamo performance claims and to further explore the dynamo's potential capabilities. Performance claims are as follows: Dynamos are scaleable fro 100 kilowatts to 1,000 megawatts. One 1000-megawatt dynamo is about the size of a two-car garage. For comparison, Hoover Dam's 17 generators have a total capacity of 2,000 megawatts. A dynamo can run continuously for about 25 years or more with little or no maintenance, no external fuel source, and no pollution. If a dynamo's output is 1 megawatt, its' total input power is approximately 10 kilowatts; therefore the dynamo's energy efficiency is about 10,000/

The source of the dynamo's huge electrical output is a nuclear reaction, which is not generally known to mainstream science. However, it is known that the dynamo produces alpha particles, which are helium nuclei, made from fused deuterium, an isotope of hydrogen with one proton and one neutron. The electrons missing from the helium nuclei are what seem to provide a copious 'sink' of electricity, and which happens to be the secret to the dynamo's ability to generate an exceptionally large amount of electricity. It is also known that the dynamo uses high-density charge clusters. High-density charge clusters are thought by some theorists to be the basis of plasma-injected transmutation of elements and also neutralization of radioactive materials. Unlike hot fusion and fission reactors, the dynamo does not accumulate any radioactive component.

The result of the dynamo's processes is conversion of electrostatic fields to direct current. I should note, that the clear understanding of the terms like 'Coulomb's conversion' and also 'liquid Van de Graaf generator' is very important.

Schematically, the dynamo is an electrostatic transformer, or in other words an electrostatic voltage multiplier. One version of the dynamo is designed, which uses laser for a starter. There were three dynamo prototypes built. The first two small experimental prototypes were built in Vladivostok. The third and last prototype continuously generated electricity, except when turned off to incorporate improvements, from 1992 to January 1997 in Armenia.

It was mentioned above that the Armenian prototype generated a direct current of 6,800 amperes at 220 volts, that is, about 1.5 megawatts. Minimum power output has bee 500,000 watts, and maximum power output has been 2.5 megawatts during winter experiments due to better cooling. The Armenian prototype dynamo's toroid weighed 900 kilograms and had a diameter of approximately 2 meters. Cooling water is circulated through copper pipes wrapped around the toroid. The heat is expelled from the cooling water with a heat exchanger. The working temperature was typically 36 degrees.

After a dynamo is assembled, the water is literally 'jump-started' (by discharging a large bank of capacitors) to moving around the toroid. The start impulse pressure is as high as 400 atmospheres. The dynamo's controls are temporarily set to generating enough of a modest amount of electricity to sustain itself, possible even while being transported from the factory to its place of future operation. The control circuits are simple as only sensors and a control computer are used. We do not need any technical maintenance personnel.

For the Armenian prototype dynamo, two 10-Farad capacitor batteries were used to provide the initial water motion (acceleration and excitation of water). The capacitors were 20 kilograms

each, with diameters of 50 cm, and were supplied from Russian military radar stations. Using a total of 20,000 Joules, 100,000 Volts with 0.05 Amperes of current were applied to the Armenian dynamo for 3-5 minutes to ionize and polarize the water, which then started the generation of electricity.

The reason for the very high voltage provided by the large Russian radar capacitors, when starting the generator, appears to be to polarize the crystals of barium titanate. One comparison is with the electronic ignition on a gas stove. Once the barium titanate crystals are polarized, the generator is running.

After these capacitors had been used to jump-start the dynamo, a battery of buffer batteries sustained continuous operation when water motion and ionizing began. This battery bank contained 8 powerful 12-volt, 150-ampere lead batteries. The dynamo's sustaining input power was 14,400 watts. The nominal maximum output power was about 1.5 megawatts. Once, the output current was accidentally increased to 40,000 amperes for almost a minute. Fortunately, the power was reduced to a safe level before the water started to boil. Internal coils (windings) provide the control of water velocity and therefore control dynamo power. The faster the water is moving, the more electricity the dynamo generates. Once the water stops circulating around the toroid, the dynamo must be jump-started again to a minimum power level before it can sustain its electricity generation with its own output power.

The following is a condensed summary, with some editing and additional commentary, of the description of the dynamo's Russian patent IPC H 02 K 44/00, 'Method of Deriving Electrical Energy and Realization of Gritskevich's MHD-Generator'.

The dynamo is a sealed polystyrene toroid filled with ultra-pure distilled water with heavy water (deuterium oxide) added. Movement of water inside the closed loop and use of unique properties of water as a polar liquid cause a release of electrical energy as an outcome of a rupture of hydrogen connections. Additional electrical energy is drawn from nuclear reactions and micro-cavity processes. The liquid is ionized, polarized, and moving around the toroid at start-up time by a running field with the help of stimulating electromagnetic windings.

Electrostatic generator-transformer 'Hydro-Magnetic Dynamo' (GT-HMD) works due to the process of amplification and maintenance of stationary (oscillating in particular) electromagnetic field by hydrodynamic movements of the conductive medium. The stator (i.e., the toroid) is made of materials with a high dielectric permittivity. Liquid rotor is a recombined water (pure water with high molecular compounds) which moves due to the high-voltage discharges and running electromagnetic field.

The main processes in GT-HMD are:

A principle of Van de Graaf's electrostatic generator, where the solid insulating tape was changed to the liquid one;

A perpetual washout of the surface electrons from the spacer layer takes place;

A single-turn low-frequency generator works as a coaxial turn with 4 resonance points and energy carrying substance inside it that has very high resonance properties;

The electrostatic breakdowns of cavitation-vacuum structures in water take place.

The polar liquid (pure water) consists of dipoles only, i.e., strictly oriented charged molecules. During the interaction of ionized pure water with the layer of $BaTiO_3$ the electrostatic field of above 10 million volts/cm is formed. During this process the breakdown of physical vacuum takes place.

Electrostatic field coupled with action of Barium Titanate layer (if we apply electrical field to Barium Titanate, then this layer creates to sound vibrations of about 25 KHz,; this vibration helps to destroy the molecules of water) facilitate the further destruction of molecular-atomic structures of water. And due to the perpetual electrostatic discharges the breakdowns in cavitation-vacuum structures occurs and the reaction of cold nuclear fusion proceeds. With this fusion the energy of 500 kJ/mole is liberated in vacuum and the energy of 6 kJ.mole is liberated in water. Thus, new hydrogen binding form in vacuum with the energy liberation of about 20 kJ/mole. Due to this process the acceleration of ionization of polar liquid takes place. In addition the constant 'washing out' of the incomplete electron bindings from the layer of Barium Titanate occur, i.e., free electrons form. Due to this process the polar liquid transforms to the ordered flow of electrons and negative ions, which can be called very simply an ionic-electric current.

Works on creation of the experimental generator were begun in September 1991 in Armenia and came to an end in March 1992. The active working weight of the prototype of the dynamo (torus + water) was about 900 kg. The diameter of the torus was about 2 meters. Torus was made of the impact-resistant optic polysterol. This torus consisted of two halves, which were turned on the merry-go-round machine.

The mono-crystalline barium titanate was sprayed on the internal surface of the torus; its dielectric permitivity was 6000. The thickness of the layer was about 1 micron. The water was purified to the specific resistance of 18,000,000 Ohm/cm.

[Editor's Note: --- Let us remind the reader that distilled water is a good dielectric with permitivity of about 81. Usually water is not a dielectric.]
As we mentioned above, to start the dynamo, 2 condenser jars of 10 Farads each were used. The energy of a starting battery constituted 20,000 Joules, the voltage was 100,000 Volts, and the current was 0.05 Amperes to provide the initial movement of water (acceleration and disturbance).

[Editor's Note: --- Such a small current can be explained by the good electrical properties of water. Thus, it provides a high effectiveness to the system.]

The electrodes were made of metal tubes with diameter of about 5 mm. The dynamo 'ignites' by these electrodes. 32 Electrodes were installed uniformly along the torus of the generator.

The cooling system of the body of generator was a closed circuit with circulatory purified water. Copper tubes were used in this system, which were covered with glass insulation. They also were the leads of load winding. The temperature of the toroid was maintained not higher than 50 C.

An average output power with the load was 220 volts x 6800 ampere = 1490 KW. The current was direct. Periodically the power increased up to 2.5 MW, when sufficient cooling of the generator was provided.

The additional power was received from four resonance windings. This alternating current after the rectifier was used to charge the back-up battery. Thus, the total output power constituted more than 1.5 MW.

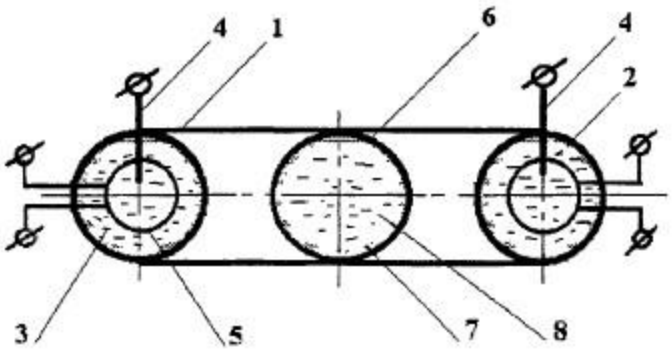
The low-frequency voltage was obtained from the load windings and the DC was obtained from the stabilization chamber.

Let's note that the high-voltage discharges of 32 electrodes ionize the partially pre-ionized water further. By means of the stimulation windings, a running magnetic field is created which moves the water in one direction inside the toroid. An electromotive force is created by the electromagnetic induction in a separate set of windings.

As we already mentioned, during the movement of the water stream, free electrons are created, and an additional energy gets emitted because of the water's friction (viscosity) against the layer coated on the inside surface of the toroid, because of electrostatic breakdowns of cavity-vacuum structures, and because of the ongoing nuclear reaction.

In addition to the barium titanate deposited on the Teflon-coated inner surface of the polystyrene toroid. The water itself also contains tiny barium titanate crystals in suspension. Ultrasound at 15 KHz is propagated through the water to form micro-bubbles on the surfaces of the suspended barium titanate crystals. Again due to the barium titanate's piezoelectric action, very high electrostatic fields also are developed within the micro-bubbles at the surface of the crystals. The electrons from the nuclear reaction are added to the electrons generated at the toroid's inner surface. The total amount of crystalline barium titanate in the Armenian dynamo was nearly 1000 grams.

Patent WO 0115305A1 (in Russian; PDF format)



(57) Abstract: The invention is directed at increasing output, reliability and environmental safety of MHD generators as well as at simplifying the design of said generators. The inventive method for the production of energy comprises the following steps: a polar liquid (8) is circulated in a predetermined direction along a hermetically sealed toroidal channel (1) by means of a travelling magnetic field, and electric power is collected by means of electromagnetic winding. The liquid is ionized at least at the stage of launching, by means of electrodes (4), for example. The internal walls (2) of the channel have a dielectric constant which is higher than the dielectric constant of said liquid.

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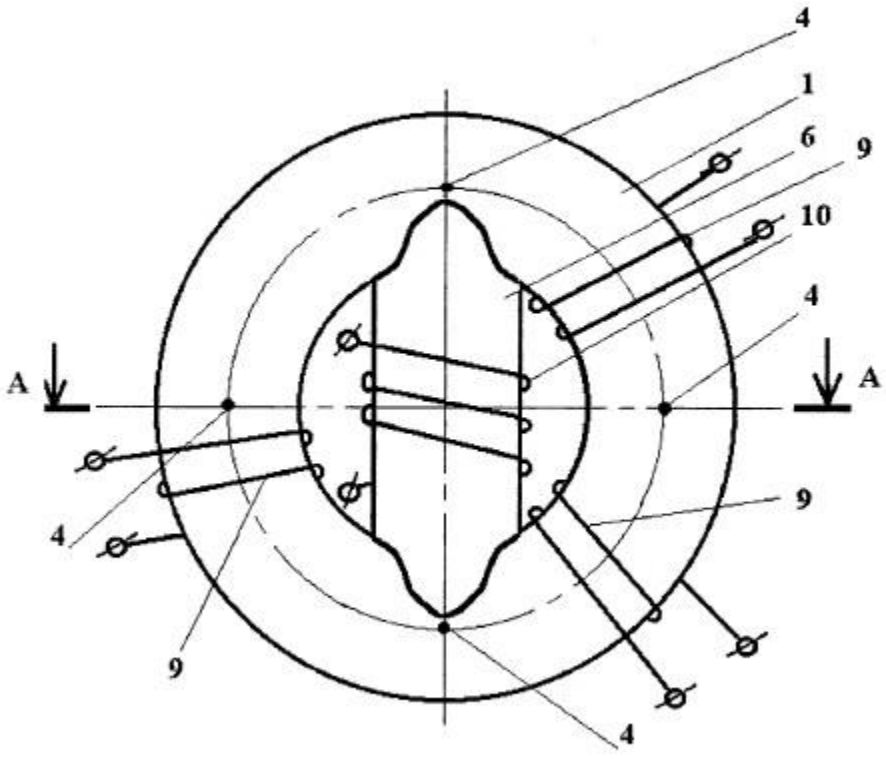

Фиг.1

Dynamo Economics

The dynamo's production cost is estimated at $500 per kilowatt which is competitive to nuclear power's capital cost of $5000/KW, windmill capital costs of $4000/KW, etc. A well-run nuclear power plant can generate power for 1.5 cents/KH-hour. Coal at 1.8 cents, natural gas at 3.4 cents, and oil at 4.1 cents, on the average. The dynamo's operating costs would be approximately 0.1 cent/KW-hour with no external fuel needed and without pollution.

Dynamos could replace all nuclear power plants, solar installations, wood-burning furnaces, hydroelectric dams, windmills, fossil-fueled power plants, etc. Satellites, locomotives, heavy trucks, airplanes, and ships are obvious transportation applications.

A recent IEEE Spectrum article stated that the world demands for electricity increases approximately 500 MW every day. To put this in perspective, the equivalent of another Hoover Dam would have to be built every four days to keep up with world electricity increased demand. Or, a dynamo manufacturing company would have to build another 500 MW dynamo every single day to keep up with world electricity increased demand in addition to replacing all existing generators fueled by hydro, nuclear, and fossil fuels.

US Patent Application # 2004168716 (A1)

METHOD FOR TRANSFORMING ENERGY AND VORTEX TUBE FOR CARRYING OUT SAID METHOD

Oleg V. GRITSKEVICH, et al.

Applicant: SINTOS SYSTEMS OU (EE)
Classification: - international: H02N3/00; F24J3/00; F25B9/04; H02K44/08; H02N3/00; F24J3/00; F25B9/02; H02K44/00; (IPC1-7): F25B;- european: F24J3/00B; F25B9/04; H02K44/08B; US Cl. 136/205
Application number: NO20030003712 20030820
Priority number(s): RU20010105128 20010221; WO2001RU00503 20011122
Also published as: EP1396690 (A1) // WO02066909 (A1) // CN1491338 (A) // CA2437493 (A1) // NO20033712

Abstract --- The invention relates to the electric-power industry and can be used for producing both thermal and electric energy and for measuring the liquid or gas flow temperature. The aim of the invention is to increase the performance of the vortex tube based on Ranke's effect and to extend the functional capabilities thereof for producing electric energy. The inventive methods for transforming energy of a running liquid or gas flow inside the vortex tube using Ranke's effect are carried out by an additional heating of liquid or gas in the hot part of the vortex tube and/or additional production of electric energy taken from windings (10) mounted on the vortex tube-case (1), the said case being made of a dielectric material. The inventive vortex tube for

carrying out the said method comprises a tube-case (1) provided with a cyclone (3) at the end side thereof. Though, the said case is not grounded and is made of an electrically non-conductive material with electro-static properties.

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Description

TECHNICAL FIELD

[0001] This invention relates to the electric-power industry and can be used for the production of both thermal and electric energy as well as for the alterations of temperature inside the liquid or gas flows.

BACKGROUND ART

[0002] A French engineer J. Ranke's usage of a vortex tube for the transformation and extraction of energy is widely known. First, the vortex tube was used to divide a gas flow into the hot and the cold streams. A classic Ranke's vortex tube [1; 2, page 108] contains a cylindrical tube with on one end a cyclone, which is connected to one of the edge sides of the case, having a diaphragm on the other edge side (cold part), and a breaking device, which is a regulating cone inside the cone at the end, opposite to the cyclone (hot part). Compressed gas is fed tangently through the cyclone to the tube where it is divided inside the vortex flow into the cold (central) and the hot (peripheral) components. A cold gas flow leaves the tube through the diaphragm, and a hot part of the flow gets out through a ring-gap between the inner surface of the tube and a regulating cone.

[0003] Later on, the works on increasing the Ranke's vortex tube effectiveness were aimed at the optimization of the constructive elements parameters; for example, through the use of a coned case [3], through optimization of dimensions correlations [4], through bringing into the flow part the elements, which organize and preserve the laminar and turbulent flow mode [5], through the correlation between the elements--for instance by connecting the hot flow to the cold outflow [6].

[0004] The usage of the Ranke's gas vortex tubes known constructions is not effective enough, particularly because the movement energy of the loaded particles, which occur during the vortex flow movement process, and peculiarities of the correlations between the thermo-dynamic parameters of different flow cuts are not used.

[0005] Much later a liquid splitting was carried out into Ranke's vortex tube (water in particular), yet it has been divided not into the cold and the hot streams, but into the cold and the warm flows [2, page 171]. The simplest vortex tube used for such a splitting in order to heat the water, contains a tube-case with a cyclone on one end connected to the case on the edge side [7]. The effectiveness of water heating in such a tube--when calculated on the base of the classic thermo-dynamic laws--exceeded 100%. The placement of a straightening break inside the tube--particularly the radial ribs--resulted in the effectiveness increase of 150-200%. Besides, the

occurrence of additional energy (which was proved in practice) was explained by the cold nuclear synthesis reaction (occurring, for instance, as a result of cavitations), by the vortex movement radiation, in other words by the transformation of the waters inner energy (intermolecular correlative energy as well as the energy of the inter-, inner and external-nuclear correlations) into the heating [2, page 193]. Yet the movement energy of the loaded particles, which occurs as a result of the abovementioned reactions, was not used in the applications of the known Ranke's vortex tube. Besides, the particularities of the thermo-dynamic parameters correlation in different flow-sections were not used sufficiently though the effectiveness increase of the vortex tube function by the increase of the outflow waters temperature up to more than 60.degree. C. [2, page 166] (external heating) has been notified.

DISCLOSURE OF THE INVENTION

[0006] The disclosed technical task is to increase the effectiveness of the vortex tube operation using the Ranke's effect as well as to enlarge its functional possibilities--to produce the electric energy with it.

[0007] The first method of transforming energy from the running liquid or gas flow inside the vortex tube based on Ranke's effect is achieved through the additional heating of liquid or gas in the hot part of the vortex tube; thereby the effect of such a heating is somewhat higher than the heating of the initial liquid or gas.

[0008] It is recommendable to conduct some additional heating by means of electrical ignition impulses-discharges, for example inside the gap between the breaking device and the inner surface of the vortex tubes hot part, thus inside the hot flow. Heating the breaking device itself is also possible.

[0009] The second method allows some additional electric energy taking, which is obtained from the electromagnetic windings mounted on the vortex tube-case made of dielectric material. It is recommendable to isolate the vortex tube-case from the ground. The laser--preferably the UV-diapason one--might irradiate the liquid or gas flows. It is recommendable to send the laser beam along the vortex tube axe from the cold part to the hot one.

[0010] The best result is achieved by mixing both methods: additional heating is done by means of electric power generated by the case windings.

[0011] Vortex tube used for this method contains a tube-case with a cyclone on the end connected to the case with one edge side; hereby the case is not grounded and is made from electrically non-conductive material with electro-static features.

[0012] A tube-case can be made as a rotational paraboloid with its cross-section, which becomes bigger away from the cyclone connection side. It is recommendable to position the tube-case vertically while the cyclone connection side is mounted downwards. It is recommendable to use the tube-case material which has a bigger co-efficient of dielectric penetration than a liquid or a gas the vortex tube is used for.

[0013] Another cyclones edge side might have a diaphragm with its axe direction coinciding the tube-case and its diameters opening smaller than the inner diameter of the tube-case. Optical quantum generator might be additionally mounted on the cyclone side of the tube-case external edge; the axe of its beam spreading coinciding the tube-case axe. It is recommendable to use a UV-diapason optical quantum generator. It is recommendable to use a material, which possesses the ability to reflect the beams generated by the optical quantum generator at least for the tube-cases inner surface or a part of it. The inner surface of the tube-case or a part of it might have a coating which has a bigger dielectric penetration co-efficient than a running liquid or gas which the vortex tube is used for; hereby it is recommendable to use a coating made of segneto-electric material.

[0014] At least one inner tube with the open edges made of dielectric material with a dielectric penetration co-efficient bigger than this of liquid or gas the vortex tube is used for, can be placed with a gap coaxially free inside the tube-case; hereby the inner tube length should be less than the tube-case length.

[0015] The inner tube can be made of dielectric material with magnetic features, yet hereby the magnetic power direction coincides the tube axe itself

[0016] Breaking device can be mounted inside the tube-case on the end opposite to the cyclone; it can be, for example, a gap-mounted regulating cone, particularly hole and/or with a concaved surface, with an axe correlating with the case and its peak towards the cyclone.

[0017] It is recommendable to have the electromagnetic winding mounted on the case. Breaking device can be provided with a heater, preferable an electric one.

[0018] Besides, it is recommendable to construct a heater, which consists of at least one pair of electrodes, one of which is mounted on the breaking device, and another--oppositely on the tube-case. It is possible to place several pairs of electrodes with their working parts placed inside the gap between the breaking device (regulating cone) and the tube-case inner surface. It is recommendable to have the electric heater electrically connected to the electromagnetic winding.

[0019] The heater might be also non-electric, thus containing a burner for burning the liquid or gas fuel; thereby the burner's nozzle is directed inside the breaking device cone cavity.

BRIEF DESCRIPTION OF THE FIGURES ON THE DRAWINGS

[0020] The invention is illustrated by the drawings of a thermo-electric water generator. FIG. 1 shows the general outlook of a cylindrical thermo-electric generator (water-flow direction is shown with the arrows), FIG. 2 shows the cross-section of its middle part. FIG. 3 shows the general outlook of a coned thermoelectric generator.

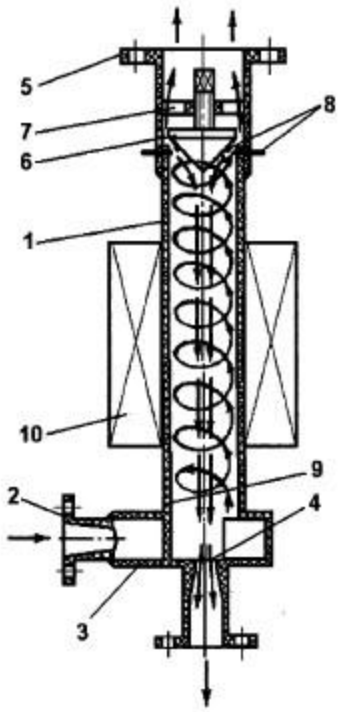


Fig.1

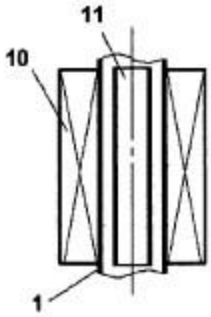


Fig.2

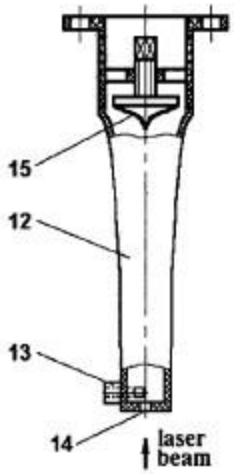


Fig.3

THE EXAMPLE FOR CARRYING OUT THE INVENTION

[0021] The invention is explained on the examples of the thermo-electric water generator based on the Gritskevich's Vortex Tube.

[0022] A cylindrical thermoelectric generator, which is placed vertically as it is shown on FIG. 1, contains a tube-case 1 with a cold part, which is switching a snail-formed cyclone 2 with an injector nozzle 3 and a diaphragm with an opening 4. A hot part contains an outlet nozzle 5, a regulating cone 6 with an axe-regulating device 7 and a pair of electrodes 8, which are evenly spread along the circumference of a gap between the case 1 and the cone 6. A case 1 is coated inside with a thin layer of Titanate Barium (TiBa) and is provided outside with an electromagnetic winding 9. Case 1, snail 2, cone 6 and nozzles 3 and 5 are made of plastic and isolated from the ground.

[0023] A cold-water flow entering the cold part through the nozzle 2 is divided into the warm (central) and the hot (peripheral) parts inside the vortex movement generated by the snail 2 in the case 1. While rotating, the hot part of the flow adjusting the inner layer 9 moves to the case 1 hot part and flows out from it through the ring-gap between the case edge 1 and a cone 2. While rotating, the warm part of the flow reflected from the cone 4 moves towards the opening 4 and flows out through it. Being partly ionized (through its friction against the layer 9 and through cavitations processes of cold nuclear synthesis), the water gets additional ionization through the electrodes 8 high-voltage discharges; the additional water heating is done also by means of those discharges. The electric movement power occurs through electro-magnetic induction in the

winding 10. A part of the windings 10 electric energy is used for the creation of discharges between the electrodes 8. To improve the water flow splitting into the warm and the hot parts as well as to increase the water ionization ratio, a plastic inner tube 11 can be placed inside the case 1 as it is shown on FIG. 2. Plastic has to have magnetic features; magnetic power direction of the tube 11 has to be directed along its axe, which allows the exact centering of the tube 11 during the thermoelectric generator operation.

[0024] FIG. 3 shows an example of a coned thermoelectric generator set (electro-magnetic winding is not shown); its construction and details are similar to the abovementioned construction of a cylindrical thermo-electric generator. A thermo-electric generator is mounted also vertically and contains a coned tube-case 12 with a cold part, which switches on the cyclone constructed as a tangent-feeding nozzle 13, a diaphragm with an opening 14 and a UV-diapason optical quantum generator (not shown). The hot part contains a regulating cone 15. Parabolas form the case 12 inner and the cone 15 external coned surfaces. Coned thermo-electric generator works similarly to the abovementioned cylindrical thermoelectric generator with one exception that there is no additional water heating in the hot part, while a UV-diapason laser beam passing through the opening 14 provides additional water ionization.

Information Sources

[0025] 1. U.S. Pat. No. 1,952,281, 1934.

[0026] 2. Ju. S. Potapov, L. P. Fomiskiy, "Vortex power engineering and cold nuclear synthesis from the position of the movement theory".--Kishinew-Cherkassy: "OKO-Plus", 2000.

[0027] 3. Certificate SU 1304526, 1976.

[0028] 4. U.S. Pat. No. 3,277,28, 1994.

[0029] 5. Patent application RU 5067921, publications date: Jan. 9, 1995.

[0030] 6. Patent application RU 95110338, publications date: Jun. 20, 1997.

[0031] 7. Patent RU 2045715, 1995 (the prototype)

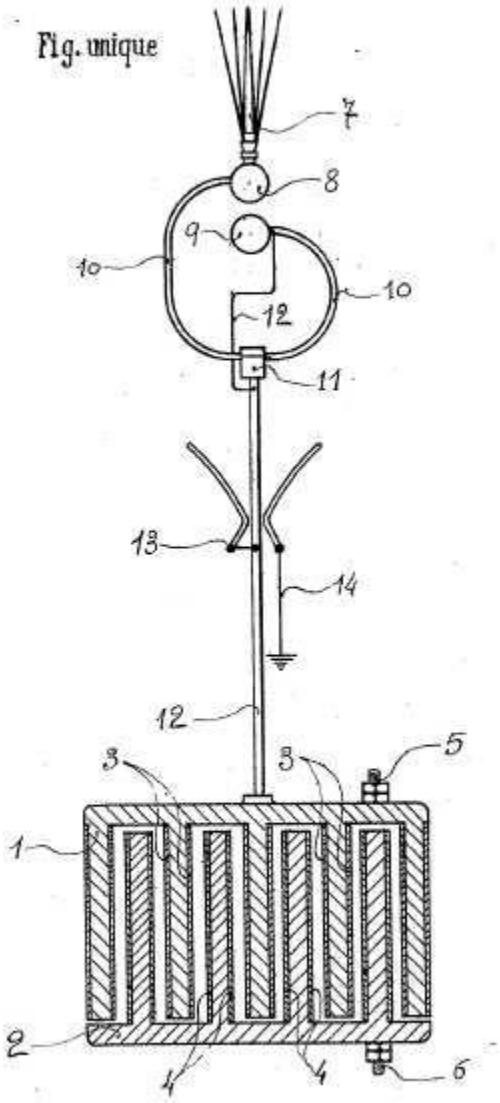
Suzanne GUILLEMETTE

Perpetual Electrostatic Force

French Patent # 817,556

Perpetual Electrostatic Force

(6 September 1937)



The perpetual universal electrostatic force has long been the subject of research of all kinds by many scholars, in order to come to tame the static constant contained in the universal atmosphere. To date, none of them had managed practically.

However, some have managed, in different ways, to capture a relatively infinitesimal amount of barely controllable electricity, remaining in the laboratory : a flow also very irregular, often obtained by extremely prohibitive means, this current generally does not exceed a few milliamperes, thus remaining practically unusable in any practical or industrial application.

The invention object of this patent, completely remedies these drawbacks by making it

convenient and extremely economical to obtain and use this constant electrostatic force by a new system, thus producing a continuous and perfectly regular electrical current and whose power allows its practical application and industry in a wholly consistent and perfect manner.

The system works automatically and indefinitely, with absolute regularity and continuous, with no consumption, and no maintenance during the many years necessary for the destruction of the device, for normal breakdown caused by time alone.

Static electricity and obtained thereby makes it useful in all applications of electricity, for example: medical power, in electroculture, operating telephones, electric clocks, recharging batteries, etc..

The natural static electricity produced by this system provides exceptionally advantageous properties in certain applications (unknown properties of the current industrial electricity), for example: medical electricity applied to men, applied to animals, plants, the results are far superior to all other known applications.

Its unique properties also allow in some cases carrying out electrical installations extremely economical, e.g. bare wire, no insulation, and may be in direct contact with the ground, even under water without suffering any loss of this electricity, etc.

In addition, the particular characteristics in all household applications running, seems to avoid the dangers of electric shock and fire, etc..

However, this static electricity, which naturally, as lots of devices covered by this patent and revealing the unknown properties of new electrical potential, does not hinder its industrial application; it is sufficient to convert the electricity, if only in passing as batteries, to take immediate known properties of common industrial flows, and this only if we encounter difficulties in its direct application.

To fully understand the invention, the following description by way of example only an application with references to the single FIGURE of the accompanying drawing. The single figure shows a complete unit with its details, in working order.

Referring to FIG. 1 shows a portion of the device, consisting mainly of an electrostatic capacitor suitable light load seen in section; $ cut valves dandruff electrostatic potential for raising the load; 4 cup valves brush electrostatic discharge; 5, an outlet to use circuit; 6, making a return circuit use; 7, an air sensor, 8, a secondary excitation capacitor, 9, a secondary excitation capacitor, 10, a frame connecting said condensors 8 and 9, 11, an insulator-fixing assembly, 12, a connection to the main condenser 1, 13, a common device for protection against electrical surges, 14, automatic discharge surges, ground.

The whole forms a kind of electrostatic pump, placed in an atmosphere of electricity, automatically ensures its elevation within the natural potential of static electricity, allowing its distribution to any proper use and function indefinitely without any consumption, no maintenance or mechanical or chemical intervention.

The main capacitor 1 is provided with valves brush electrostatic charge 3, which soon placed in a static environment, ensure their presence by raising the potential of that power and pass the burden of that capacitor 1; this electricity can then be distributed to any practical use by distributing electricity properly established and connected to the plot 5, the return is effected by the block 6, a neutralizer-excitation load 2 Electrostatic valves provided by discharge 4 , ensuring, by their presence, the expulsion of the power contained in the neutralizer 2. These valves are preferably arranged so that the discharge of electricity, and insured, and strengthens your return to the main charging capacitor 1 through 3 valves, thereby establishing a true continuous circuit excitation load.

The atmospheric sensor-tip System 7 directly dependent secondary capacitor 8, the latter electrically connected to another capacitor excitation 9; the excitation later operates by the power supplied directly by the main condenser 1; atmospheric electricity is conducted by a main capacitor circuit 12, provided its path of proper safety devices 13 against surges and atmospheric discharges to the ground by conductor 14.

It is understood that one can change the layout of the various parts of the object of this invention according to the needs of multiple applications in that it allows all areas of applications of electricity and that, alternatively, if, for example, where, for industrial application or another does not require the special qualities of atmospheric electricity, we could refrain from the air antenna, the unit would then only charge its own atmosphere.

It goes without saying that applications, forms, details, materials and dimensions of the present invention may vary without compromising principle.

John W. GULLEY

Self-Sustaining Electric Engine

Unidentified Author / Untitled Article:

Back in 1966 Gulley invented an auto engine that ran on magnets. Of course, we all know such a thing is impossible (don’t we?) --- as did Joe Creason of the Louisville Courier-Journal who took photographs of and witnessed it in 1966. Detroit got wind of it and sent their engineers down to Kentucky to talk to Gulley. A Mr Hahn --- bigshot engineer at Ford --- looked at Gulley’s charts and patents (registration # 211,702,317, Electric Motor) and told him it wouldn’t work. At that time, the engine didn’t work --- but not fro design defects. Gulley had built the engine out of old washing machine parts with no precision fittings and it had run almost 600 miles before it shook itself apart.

Hahn made one amusing mistake. On his flight out of Kentucky he sat down next to Gulley's attorney (unbeknownst to Hahn) and proceeded to tell him all about Gulley's motor and what made it work!

Gulley was later offered $35 million for the rights to hi sengine by GM and refused to sell unless GM would promise production. Shortly afterwards an unidentified male crawled under Gulley's backyard fence to take a shot at him with a heavy caliber pistol. When the gun went off Gulley instantly grabbed a 20-gauge shotgun parked in the doorway and filled the guy full of #4 buckshot. Gulley, thinking he had been hit because of hot stucco that had fallen down his shirt from the bullet striking near him, walked back into the house to call the law. When he went back outside the body was gone --- but the ground where the man had fallen was covered with so much blood it looked like someone had been slaughtering a hog.

Gulley's house has been broken into and ransacked repeatedly since then.

Louisville Courier-Journal **(11-30-71)**

"Engine That Doen't Guzzle Gas is Ready for Unveiling"

by

Joe Creason

If all goes well, in the near future --- the "very near" future, he insists, John W. Gulley of Gratz finally will unwrap and demonstrate publicly the non-fueled, non-polluting, noiseless and self-sustaining electric engine he's been working on in secrecy for 25 years.

In Gulley's naturally prejudiced judgment, which some experts have sneered at but which has made qualified believers of others, is the automobile of the future.

However, he's quick to add that a power source for automobiles is only one of its potential uses since, in his words, it can be modified for application for everything "from sewing machines to submarines".

The engine Gulley plans to demonstrate is called the Challenger, and it's more efficient than prototype models he has put together before. Like the previous devices, it is based on the timed discharge of high voltage electricity from capacitors into the field of coils of a modified electric motor.

Now that may sound like a lot of double talk to us average laymen, but reduced to simple terms it means that the engine, if proven, could truly revolutionize the auto industry since it would weigh a furth as much, could be built for half the cost and would operate without the air-polluting fuel of a conventional combustion engine.

Although Gulley has hinted at plans to show his engine to the public several times in the past, various complications --- his health, patent problems, misunderstandings with his backers, vandals who have broken into his workshop and destroyed his prototypes --- have prevented him from doing so. This time, he persists, all the pieces are in place and the unveiling definitely will be held.

Gulley, who learned motor and generator skills during 13 years in the Army, claims to have been besieged with offers from potential investors after news of his invention was revealed here in 1966. But he has turned down all offers because he was convinced they "came from gas and oil people who would throw my plans into the ocean".

Any arrangement he makes for producing the engine will include a guarantee that ir will be marketed in competition with those presently on the market and also that it will be manufactured mainly in Kentucky.

Gulley's greatest detractors have been those who say wheat he claims to have done is an invasion of the never-never land of perpetual motion.

"Only God is perpetual", he rebuts simply.

And so the mystery of whether or not John W. Gulley has invented the engine of the future or just another pipe dream soon may be answered.

Louisville Courier-Journal **(1-26-67)**

"Joe Creason's Kentucky"

Three or four months ago I wrote about John W. Gulley, a Gratz, KY inventor who has come up with a brand new concept in a compact unit to power automobiles electrically.

The Gulley idea, which is based on a unit that generates its own current as it operates, sounded so much like perpetual motion, the power principle that man has dreamed about since the dawn of time, that the story stirred up an unusual amount of interest.

As a matter of fact, just this week I received two letters asking about the invention, bringing to more than 75 the number of inquiries that by now hae come in from Kentucky, Indiana, and five other states.

So here is the latest chapter in the story that, if you'll pardon my leaning on the old Tom Swift series, might be titled "The Further Adventures of John Gulley and his Electric Runabout".

At present the invention which Gulley calls the Cobra Queen Electric Powering Assembly in the papers he has filed with the US Patent Office, is undergoing scientific research by an outside engineering firm. The reason for this is to determine the feasibility and practicality of the assembly in areas other than just the electric propulsion of vehicles.

Gulley is pushing to have this work completed soon so that he can demonstrate his idea in open competition against electric cars being developed by at least two major manufacturers. He hopes to be able to issue a challenge for public testing by midsummer.

"I know the principles the big auto makers are using, and I know my assembly is far superior", insists Gulley, a motor and generator expert who has been working on his ideas since 1946.

Reduced to simplest terms, Gulley's power plant doesn't depend on a battery --- and it was the bulky battery that had to be recharged every few hours that caused earlier electric cars to flop. His secret is a motor with a new type of winding that never before has been submitted to the Patent Office. A battery is needed only to start the unit; after that, it generates its own current.

The power unit weighs less than half that of conventional gasoline engines, and any known make of gas-burning car can be converted to use it easily and cheaply merely by changing the flywheel and applying it to the main power shaft of the Cobra Queen, Gulley says.

Since my first story, Gulley himself has been besieged by letters and calls from person wanting to invest in the idea, technical magazines wanting to do detailed articles about his car, and one letter from Senator Robert F. Kennedy, saying he was calling to to the attention of federal authorities concerned about air pollution.

The next chapter of the story won't be written from some months yet. I'll keep you posted.

Louisville Courier-Journal **(4-12-69)**

"Patience Wearing Thin, Inventor Plans Proof"

by

Joe Creason

Since he's been nursing his idea for an engine to power automobiles electrically for 23 years now, you'd have to say that John W. Gulley has the patience of a prophet.

But his patience is beginning to wear a mite thin and he's beginning to tire of demonstrating his idea to experts and then having them just tell him it's the most revolutionary thing they've ever seen.

In short, John Gulley, who lives at Gratz, KY, thinks it's about time the fish started biting.

After all, as he explains, every expert who has examined his electric powering device (including technologists for both the Army and Navy) have declared them to be theoretically sound.

Moreover, with health exerts showing alarm over the way gas and diesel engines are pushing air pollution to the danger level, he believes the time is right for a non-polluting motor that can replace internal combustion engines.

If it was known what his motor can do without polluting the air, and at a fraction of the cost of conventional methods, Gulley believes the public would be clamoring for his engine. Then not even the powerful oil and automobile lobbies, which he suspects are working against him, could continue to keep his ideas on ice.

The Gulley secret, which he started developing in 1946, is a compact motor he has patented under the name of Cobra Electric Powering Assembly and which generates its own current as it operates. A battery is needed only for a split second on starting.

In case you feel that sounds suspicious like the age-old theory of perpetual motion, you're right. As a matte of fact, that's the first hurdle Gulley has had to clear in every instance where skeptical experts have been converted into believers.

"It isn't perpetual motion", Gulley insists, "because bearings, shafts and such will wear out".

Gulley's growing impatience arises from the fact that, after putting his plans through computers which stamped them as sound, the Army Engineers have delayed having a private research organization start a detailed study.

If something isn't done by May 15, Gulley plans to shake things up with a public demonstration. He'll take a car fitted with one of his engines to Bufflao, NY, and drive it across the continent to Los Angeles. That would prove several things, he believes: that the car does not use any fuel, it employs no energy except that generated by his motor, and it can operate at maximum speed limit for long distances without having to get the power source recharged.

The Cobra Queen is only one Gulley invention. He has also developed the Swengine, an electric engine that drives a generator furnishing current back to the motor. This unit, he says, could power ships, the largest earth-moving machines, and the like.

But at the moment, the Cobra Queen is the motor he's impatient to unveil.

Louisville Courier-Journal **(11-8-70)**

"Inventor Claims Car of Tomorrow"

by

Joe Creason

John Gulley's promise to the world of tomorrow is a noiseless, smooth-riding electric automobile, cost-free in operation and emiting no fumes to pollute the air.

Working in a small, cluttered shop in rural Henry County, the self-styled disciple o Albert Einstein claims his machine is ready for mass production.

Further, he adds, the Einsteinian principles that make his car run can be modified for application in the entire field of mechanical movements --- "everything from a sewing machine to a submarine".

"The day is coming", he said, "when all household appliance will run on their own power, with no help from electricity wired into the house.

Such talk naturally draws more smiling disbelief than it does open-mouthed awe from scientists and engineers, especially coming, as it does, from a high-school dropout and self-taught inventor, working in the unlikely location of Gratz (population 70).

The scientific sneers come, however, only fro those who have only heard the 64-year old Gulley's "impossible" theories, his claims of taking up where Einstein left off in the "unknown field" of gravity as a source of electric energy.

In Penfield, NY, lives a reputable young scientist who spent three months with Gulley and was made a qualified believer.

Van Combs said from his home in Penfield that Gulley "can do things from a practical point of view that defy present scientific evidence.

I can understand that he must be secretive, but he has got to find somebody he can trust and allow them to take his devices apart. I don't know why he has delayed. It makes it all look a little odd".

Gulley says his automobile is powered only by his own design of cils and a generator, using a battery for the sole purpose of activating the motor.

He says he drove an experimental machine "27 miles short of 600 miles at zero cost" and that when it stopped running "there still was no trouble in the electrical system".

Gulley says his car engine weighs a fourth as much as an internal combustion engine, can be built for half the cost, and will last 10 times as long.

Gulley claims that modifications produce a motor capable of 10,000 rpm, comparable to the average 8-cylinder car's 5000 to 6000 rpm.

"My devices are important to the aircraft people too", he said. "They can run as fast as the jet. They can power big earth movers, cranes and anything needing great power".

So why doesn't Gulley get on with the show?

His story is that he has received offers up to $36 million for his patents from men representing auto makers who "would throw my plans in the Atlantic Ocean just so they can protect the big oil and gasoline people".

He said he will demand guaranteed arrangements form trustworthy financiers who will actually market his devices in competition with present industrial giants.

He will also demand, he said, that most of the manufacturing machinery, for parts and assembly, be housed in Kentucky as part of a dream to make Kentucky the "greatest industrial state in the country".

Living now on a disability pension form the Army, Gulley was asked to explain his ability to reject such offers as $36 million.

"I would have just a big stack of money to fool with", he said. "I wouldn't have to work. When this thin is worked out the way I want it to be and the money does come along, I plan definitely to give 9 out of every 10 dollars I receive to feed the hungry people of the world. I have no desire for wealth".

Louisville Courier-Journal **(1-7-74)**

"Gasless Engine: A Solution to the Energy Crisis?"

by

Joe Creason

It's been an agonizingly long waiting period --- going on 30 years, actually --- but John W. Gulley of Gratz, KY believes 1974 just may be the year when he makes a major contribution to the energy crisis.

To say the least, in the next few days some high brass from the US Army Engineers' Office of Power Technology will be coming to Guley's garage workshop in Gratz to look into his claim that he has perfected an idea that could make gasoline a thing of the past as a transportation power source.

You see, Gulley is the inventor of the "Swengine", a small, noiseless, self-contined electric engine that, according to him, could be modified to power anything from sewing machines to submarines --- but especially automobiles.

Gulley is now convinced, he says, that the skeptics who for years scoffed at his inventions are now being won over and that actual production of his Swengine could begin soon.

If this comes to pass, if the Swengine lives up to his claims, the result could be the most revolutionary development in the history of the automobile industry.

Imagine, if you will, a car engine that not only weighs a fourth as much as normal internal combustion engines, but requires no fuel, no cooling, no intake or exhaust systems and doesn't emit carbon monoxide fumes to befoul the air. Add to these energy and environmental advantages Gulley's conviction that it can be built for half the cost and las 10 ties as long as conventional engines and the potential impact of the Swengine is mind-boggling.

Although the Swengine is patented, as is also the Quagga Scout, a motor, it is difficult to describe Gulley's invention in detail because it involves many so-called "impossible" theories. But put loosely in lay language, the Swengine operates on his own design of electromagnets and a generator that powers the engine after it has been started by a battery. There being no friction bearings, the engine has indefinite life expectancy.

Since all that suggest the field of gravity as a source of electrical energy, skeptics have said Gulley is laying claim to having created perpetual motion.

"This is not perpetual motion", he counters. "The material used in this engine will wear out in time and for that reason, if no other, it isn't perpetual".

Gulley, now 67, is a motor and generator expert who learned his skill during 13 years of Army service. He started thinking about an electric car in 1946 after he was retired because of a circulatory ailment.

After repeated experiments, he finally developed an engine he called the Cobra Queen and tested it in a car. He wasn't given the time of day when he started trying to sell his idea to manufacturers. In retrospect, he suspects the powerful oil and auto lobbies have been working against him all along because of what his invention could do to them.

Finally, after the Swengine evolved from continued experimenting and since he felt he could trust the Army not to put his idea on ice if it could be proven, he decided to try the Washington route. At first that was slow going, too, but in the last year, with the help of Senator Marlow Cook and Representative Tim Lee Carter, who set up appointments for him with the right people, the Army began to show more and more interest.

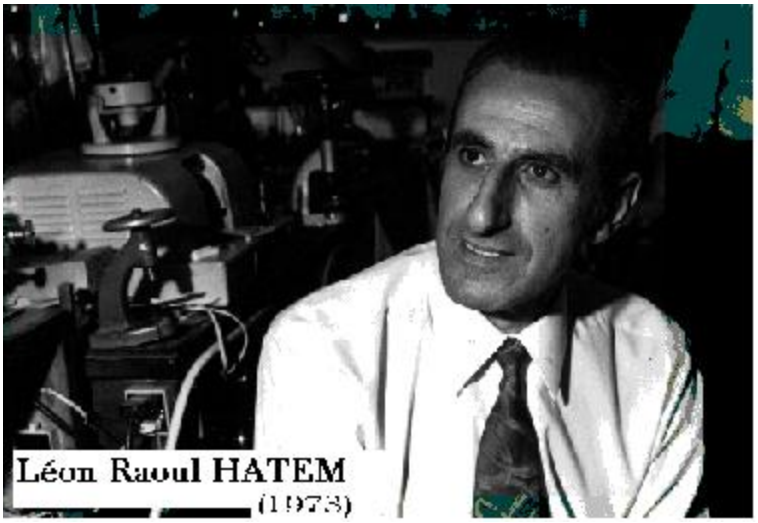
Although he's been disappointed before, Gulley believes the upcoming meeting with engineers from the Office of Power Technology may be the light at the end of the tunnel. He hopes to have an engine in his car at that time to use in a demonstration.

Who knows? Maybe a breakthrough the energy-starved world needs will be coming from a setting as unlikely as a garage workshop at Gratz, Kentucky. If it's ever going to come, now is precisely the right time.

Leon Raoul HATEM

Magnet Motor

http://www.hatem.com/atom.htm



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Photos

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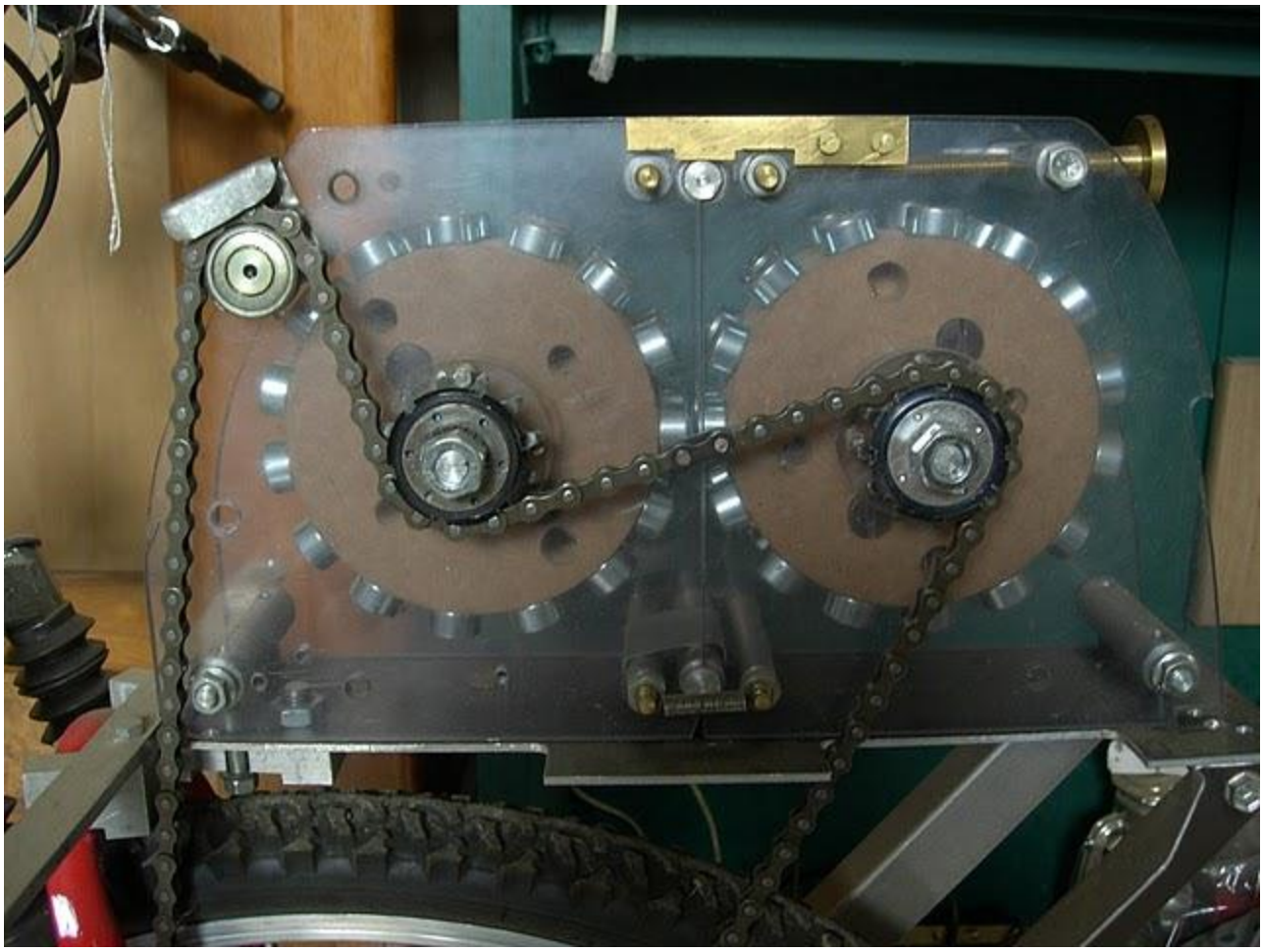
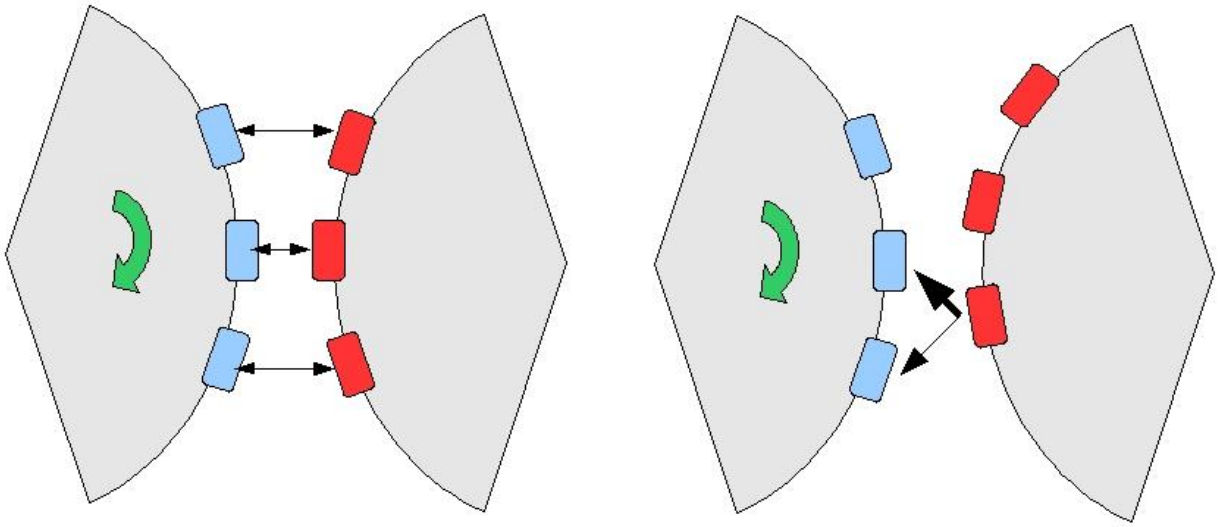
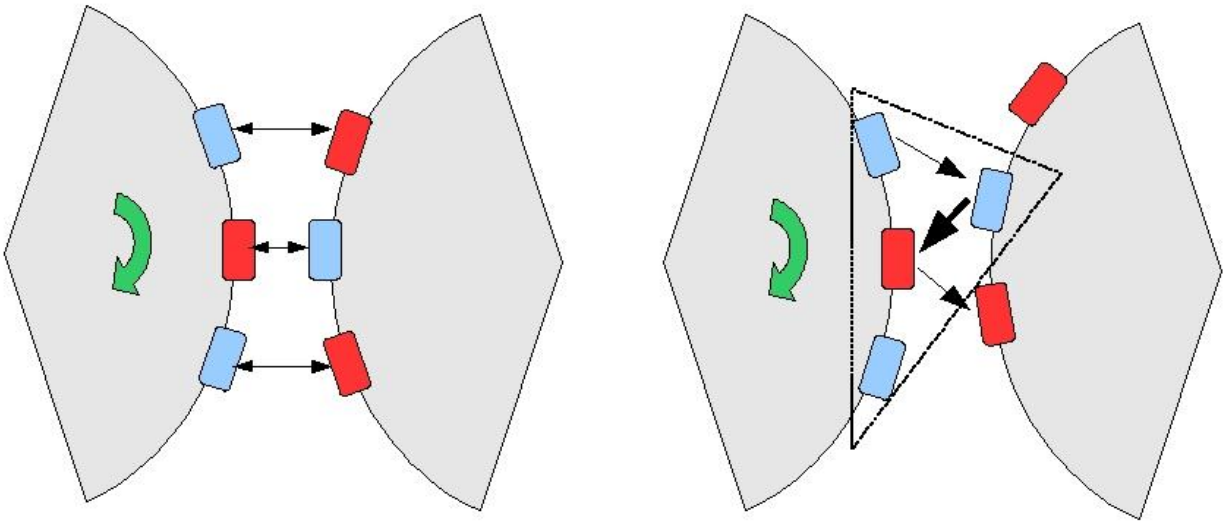
Bicycle :

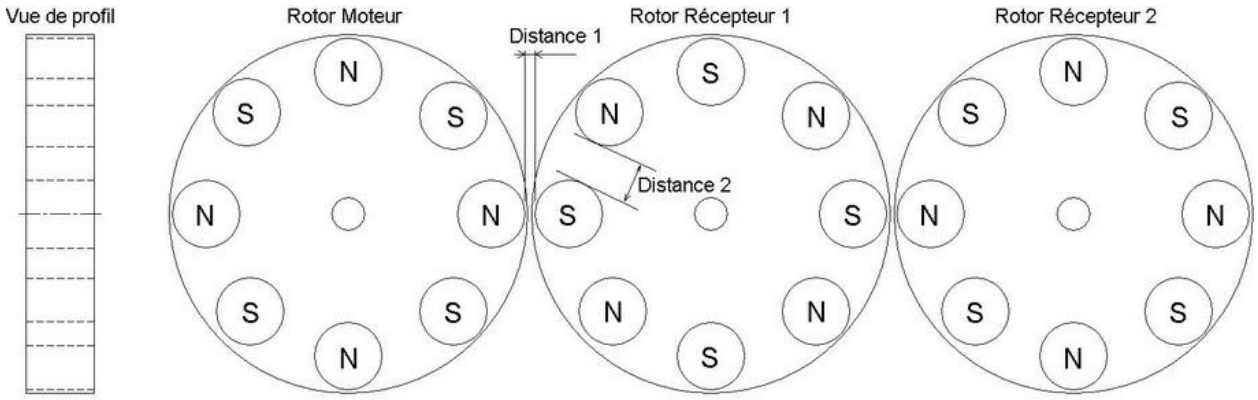




En cas de glissement, cette configuration va avoir tendance à accélérer le phénomène à chaque aimant.
S'ils sont tous de même orientation, un aimant bleu va chercher n'importe quel aimant rouge.

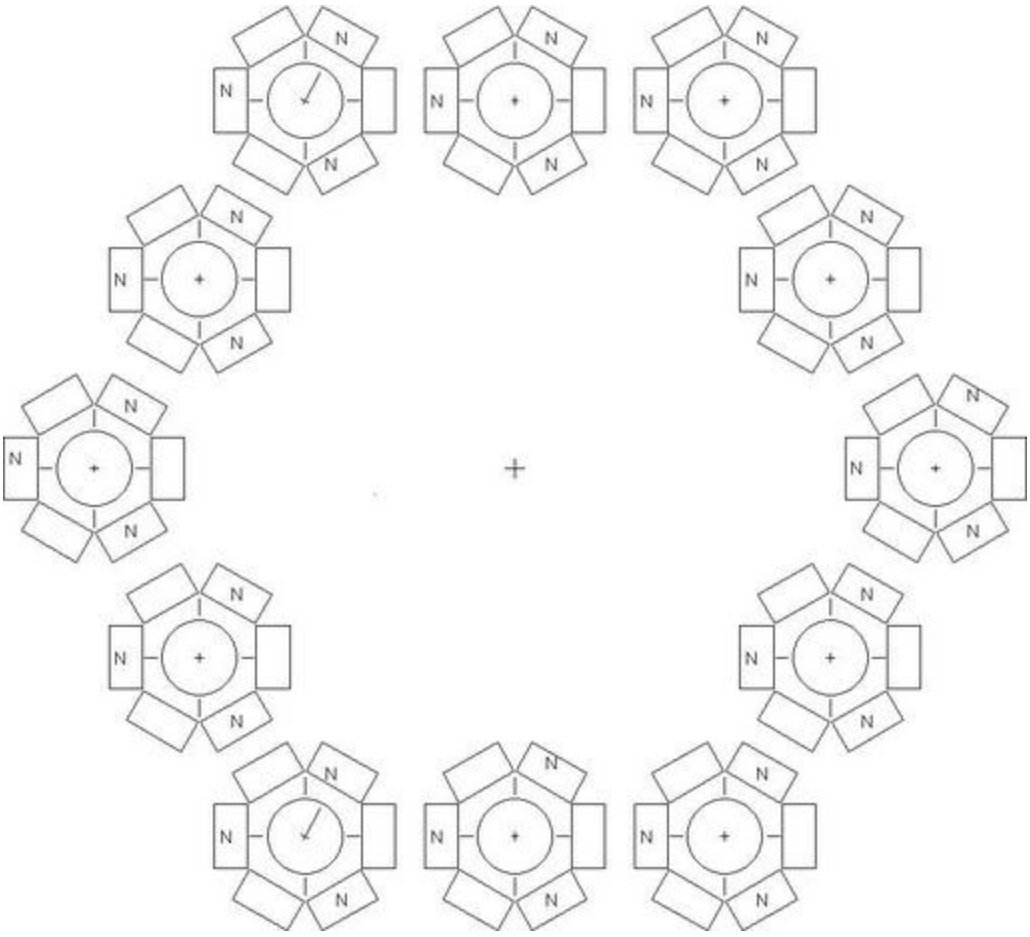


Si les aimants sont alternés ils restent en attraction, mais l'alternance crée une sorte de crantage naturel qui limite le glissement.
L'aimant bleu central de droite est attiré par l'aimant rouge de gauche, mais s'il y a glissement, non seulement l'aimant rouge va retenir le bleu, mais les aimants de même orientation vont en se repoussant participer eux aussi au maintien de l'aimant bleu de droite dans sa fenêtre.

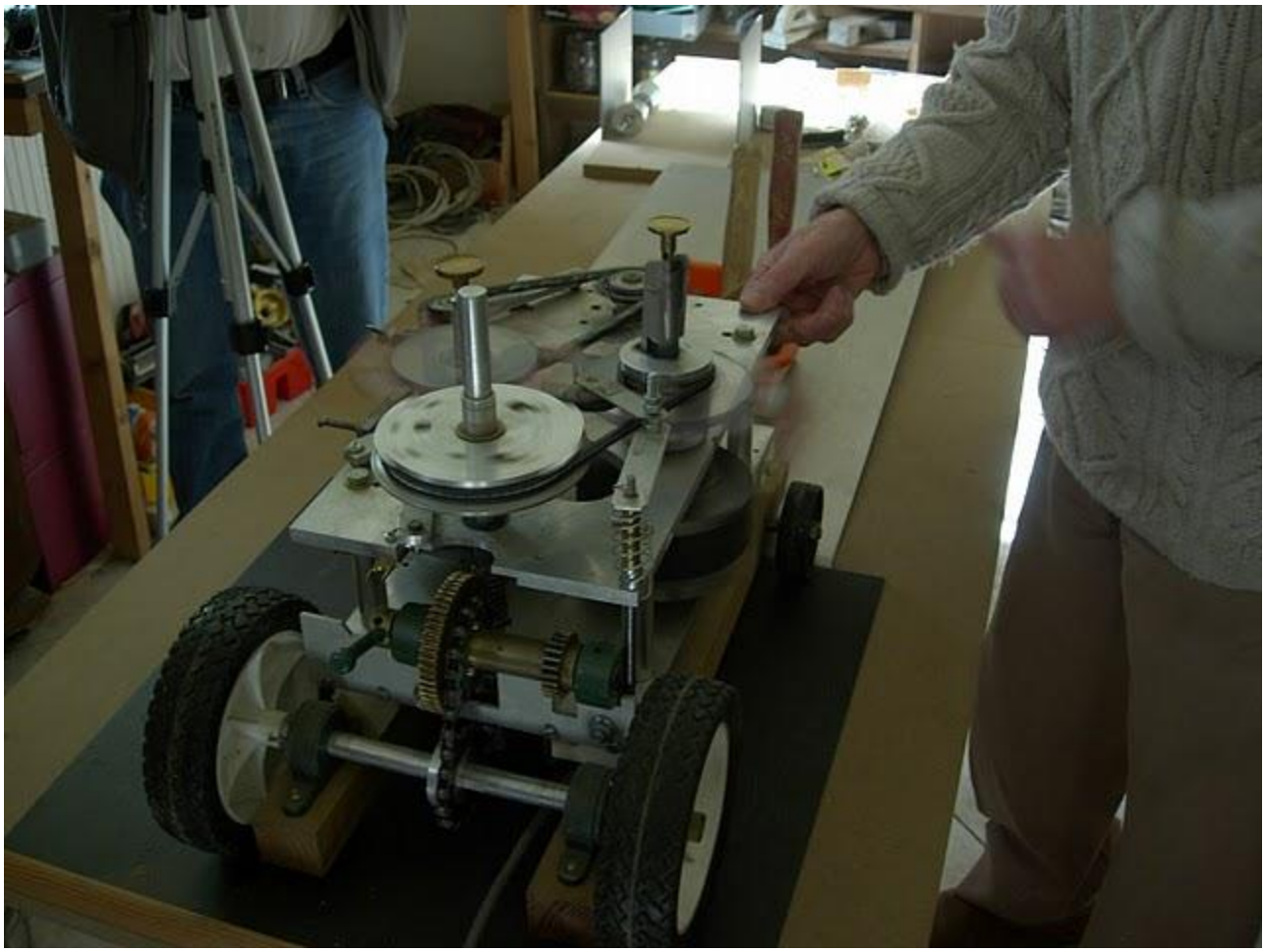


Dans cette formule le champ magnétique est toujours orienté sur les deux faces.
second point pas de face plate mais un point d'attraction culminant sur le diamètre.
Troisième remarque, la distance d'entrefer D1 est à régler selon l'éloignement entre aimants d'un rotor D2.

Les champs on tendance à se bouclé dans les aimants justaposés,
mais lorsqu'ils se trouvent plus proche de l'aimant du rotor adjacent le champs change d'orientation
Puis il champ reprend sa place à l'éloignement et ainsi de suite.
Cette hypothèse vos se qu'elle vos c'est purement intuitif.



Tractor :



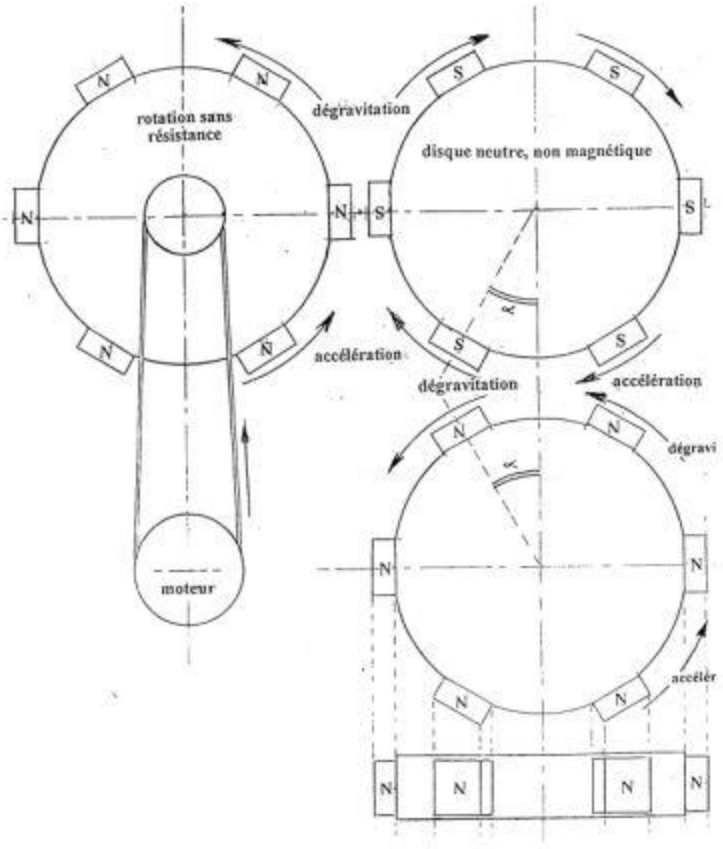
Planetarium :

FR2907278

SEMI MAGNETIC MOTOR PRODUCER Of ADDITIONAL KINETIC ENERGY

Semi-magnetic engine assembly for e.g. recharging batteries of electrical automobile, has magnets fixed on periphery of magnetic disks to produce electrical energy, and generator mounted at end of axle of each magnet to draw maximum energy

Abstract -- The assembly has a series of magnetic disks comprising magnets of different diameters, fixed on periphery of the disks for producing considerable electrical energy. The magnetic disks are successively placed under various configurations, in open/closed circle or in square. A power generator is mounted at an end of axle of each magnet for drawing maximum electrical energy. The magnets are rotated at a speed of 3500 turns per minute.



This application of Certificate of Utility relates to a particular case which is not envisaged in the statutes of the INPI, if not for systematic refusal, because it is about a method of on-unitary creation of Kinetic energy, based on the Mechanical atomic one and planetary Universal not yet recognized by the Physical one, and of which I have exposed the Principle in MAY 1955. This Principle is governed only by the attractive and repellent Magnetic energies, as by the "Gravitation" which into rises, just as the "Degravitation" object main of the deposit of Patent, and Key of the Perpetual Movement in Mechanical Atomic and Planetary one. So that the readers is not shocked by this revelation, it is necessary to reassure it by specifying that this Perpetual Movement is exclusively that of the Universe, and that it will be clarified although briefly. It must expect at the very least extraordinary revelations which he will not regret to know on the Mechanical Universal one, currently still been unaware of scientific world. It is a question of explaining in the most negligible detail, which is the Universe, why and how he is a Perpetual Movement maintained in the state by a process self-accelerator, since the most absolute rest, and producing his own Energie Kinetic, its own speeds and its own movements for Eternity, without discontinuity… Until the perfect and constant Equilibrium which makes our Universe and whose NEWTON has exposed the summary mathematical resulting of Mechanical the hatémienne TERNARY, and for which he has established a BINARY "principle" in 1687. N.B. It is necessary to insist on the fact that this Certificate of Utility does not constitute the deposit of a scientific Theory which, in good time, was offered to gracious title with the Academy of Science with WAGERINGS, (1955), rejected for nonconformity with the conventional theories by "prohibition" of immediate revelation by nona physicist, of some theory that it is, contradictory in the recognized Laws and conventional Principes. This Unitary, Integral Theory Atomic and

Cosmogonic A thus deposited with the Academy of Science under envelopes sealed for fifty years the presumedly legal duration. This period being now exceeded since 2005, and after as many years of not justified deprivation of deposit of Patent. The INPI thus sees me authorized to use of this scientific formula as for very other officially recognized. I in application also the straight one, for the Good of Humanity and Planet. “And it is not because I created the most beautiful Encyclopaedia, that it is necessary me to disavow small Dictionnaires '" makes some, “the Physical one is the Shaft which cache the Metaphysical Forest” which it single, can all explain in the detail since it includes all Knowledge… AND KNOWLEDGE CAN ALL BRING. It is obvious then, that the INPI must accept my inventive proposals which can bring until the Planet waits to solve one of the problèmescruciaux one which is posed today for the nonpolluting power generation, allowing moreover many applications of which the producing of ELECTRICITY, producing of vehicles using the Principle of Mechanical Universal to reload in waiting of better, the batteries in the course of use and to protect Io planet from the pollution; magnetic motor bicycles making it possible to save the muscular energy of the cyclist, by producing two or three times more energy than it do not provide any. ; and other applications like gears magnetic of safety, everlasting, effective, silent, as well as apparatuses to be put at the point for more powerful various electric motors, vehicles of handicapped people, caddies and other machines easier use. It is enough to know what is the Universe, and how it functions, to discreetly use of them what he us offer liberally, but, so much so that null it never had exposed. What was utterance in the wording of the initial Patent should have been enough; how is it possible that the Engineers of the INPI included/understood nothing there? But is: To know that the Universe, in each point of Infinite is precisely This Perpetual Movement governed by Magnetic Dualité and that it product permanently its own Kinetic energy, independently of very other, and in symbiosis with all the unit, is so complicated? Gold, there is an Universe, and it is perpetual. It is thus enough to know the mechanical process by which the universe creates its clean Energy, to copy it and produce also this so much coveted Energy, without for as much having to carry out an atom or an artificial planetary system. But it is not in conformity with the Physical one, and one should not anything change there. All the elements constituting the Universe, particles, stars and planets and others, imperatively consisting of Magnetic Dualities, can in fact, to attract and to remotely push back without any other “physical” bond objective, which gives for result that the “material” attracts the “material”, and by the “revolving” effect apparently which must thus consequently be clarified attractive and repellent Dualité. A gigantic gift for the Physical one! Can it refuse it? Without the Magnetic Duality, there would be no possible communication between the Beings or the objects which thus would not exist, since same the negligible atomic particles could not communicate between them if they were not Magnétiques. This Energy explains to it single, all the other “energies”, and which, without its Duality, could neither “be”, nor same to exist.

INDISPENSABLE Magnetic energy. Since 1985, thanks to my son Frank who had taken knowledge of my book “AND the UNIVERSE” was appeared in 1973, us soaps now exactly from which this Attractive and Repellent Dualistic Energy comes which becomes Universe. The Physical one can the knowledge on simple request if it wishes it. It is essential that this curious Dualité is single “the Thing” which can be, and without which, nothing could not exist; neither atom, neither “material”, neither electricity, neither direction, and thus not of possible life, nor nothing which can be conceived. Delight we to be able to discuss it in the purpose accounting for Creation and serving Planet. This Energy has in itself the counterpart of its own existence, at the

same time itself and its opposite, which enables him to appear since the INFINITE one, without any need to make call with an objective or physical entity which one could wonder from where it could leave, but with this unthinkable faculty TO ATTRACT and PUSH BACK remotely without any tangible bond. It is more than gigantic. It is it which generates all things of which Universe, and nothing other. METAPHYSICS, SCIENCE OF THE CAUSE FIRST. The Universe has thus had a Cause the First METAPHYSICS perfectly known for fifty years, and after twenty five years of searches on the magnetic energies This Cause First with it single, gives an account of all the others wrongly regarded as such, as well as all things. Just as there can be one Creative Principle, and than only one universe including the whole, it is the Metaphysics which single, makes Knowledge, guarantor of the existence of the Universe since its primitive Cause farthest: INFINITE the, NULL one, ETERNAL, IMPOSSIBLE and NECESSARY, and whose these five properties are those of the so mysterious Universe for those which hopelessly seek the fine word of the History, however perfectly known since 1955. And it is thanks to Knowledge that we will produce a colossal Energy, with the image of the galaxies comprising of the hundreds of billion stars and planets, who function since billion billion millenia occupant each point the Infinite one, per Perpetual Mouvement maintained with average constant speed, thanks to a process self-accelerator, without discontinuity since “last” Eternity and for “future” Eternity. It is that the Metaphysical Universe, most marvellous Mécanique which can be. How the Physical one can also reject exposed sublimates? not to undoubtedly disavow an acquired millenium which however still poses so many problems; and however, nothing would be changed with the Life, to offer to the world the most marvellous gift, KNOWLEDGE.

MAGNETIC DEGRAVITATIOn

Dégraviter, it is “to remove the effect of brake” between two poles, NORTH and SOUTH which attract each other, but which moves away simultaneously one from the other with speeds inversely proportional with the respective value of their mass, by “défreinage” of the one and other, removing “the attractive effect” without removing the attraction. In a magnet system in symmetrical synchronized rotations whose two poles are dégravitent in mutually move away one from the other, that makes it possible the two other poles which them, on the other hand, approach simultaneously, TO MUTUALLY ACCELERATE one and the other in precipitating one towards the other, and to produce energy. Is it necessary to make a long speech to show the reality of this principle, which is somewhat accessible to the Physicist, without him making the reproach of it; because it is effectively what arrived to the Engineers of the INPI which did not include/understand my Invention yet, undoubtedly by reprobation of the Perpetual Movement, wrongly prohibited without the lesser objective reason?. Whereas it is enough to observe the Universe. And thus my Tractor prototype functions which transmutes simply ' Magnetic energy into USABLE KINETIC ENERGY.

It is all the secret one of Mechanical Universal, and which allows the accelerated automatically Perpetual Movement of the rotations, since planetary masses, as the atomic particles are dipoles, contrary to the conventional designs. Not in it to believe, it is to alienate any possibility of Knowledge of the Universe. 3C We thus have magnets which two poles approach while accelerating mutually, and on the other hand, the two other poles which “are dégravitent” without being slowed down while moving away, allowing the two first “to accelerate”. It is now easy to understand that the poles which approached until the moment when they are on line, will

be able to their tower dégraviter while moving away L " one from the other, and to allow both on the other hand others and which now approach, to accelerate PRODUCING ENERGY in addition to that existing already. But if, it is possible!! My apparatuses are there to show it.

The SAID MATTER PHYSICAL

It is the Magnetic Duality which becomes “material” while becoming atom by the Creative Principle hatéinien that we will know further. It is this Duality which controls all in all the fields, and null there so much so that it pass for does not realize single groove-nails. Which derision. Also, without critical devaluing towards the Theories, Principles, Lois and other Constant which make the Physical one, it is at the very least necessary to explain in this certificate of utility or balance of information, Mechanical the Universal established one on three components which all are indispensable to link masses between them, in a stable TERNARY equilibrium for Eternity, producing moreover, its Kinetic energy permanently by Perpetual Mouvement, and becoming: “The Preserving, Evolutive Creative Principle and Adapter which governs all the Mechanical Universal one by Perpetual Movement Self Accelerated without any discontinuity, and which gives an account of all the physical phenomena same the most strange ". It is thus a question of specifying the very clear mechanism for which wants, which is proposed in the Patent 01 08712 deposited June 2001, based on Mechanical Universal the hatémienne, and refused for nonconformity with the Physical one, although producing Kinetic energy permanently, almost at will. Is it possible to deprive Humanity of such a revelation? Should it be waited until the Earth is dispossessed of all its Energy to understand that it is necessary to leave something to those which will come after us? Following three rejections of my “initial” Patent only deposited in 2001 after several others which could not be proposed by prohibition during these fifty years of foolish braking of scientific progress, a lawsuit took place in Court of Call of May 18, 2006 against the INPI, and did not allow yet the change which had been required of me before by the INPI itself, in 2001 for explanation, and nonretained owing to the fact that a deposit should not be modified. But this Patent was not rejected by the Court recognizing the validity of the Invention, and was recognized reliable same by the Lawyer of the Defense of the INPI, and was returned in Cassation. It is now necessary to give these precisions in this new deposit that this time, Engineers INPI should accept and include/understand, thanks to the details justified by this Certificate of Utility, in order to make my Invention clear and accessible to comprehension for any intelligence.

Let us note that the apparatuses and prototypes presented at said Tribunal, were very appreciated, recognized scientific and in state of correct operation, following what, in the sustained waiting of the decision of this Court, the INPI accepted the fifth annual instalment of the aforesaid Patent which he wanted to refuse, without any explanation on the outcome of the received Lawsuit only on August 28, 2006 this document is thus a prologue with the Patent deposited, by a more complete formulation of the apparently vague wording at the point not to be included/understood in spite of its evidence, and in order to bring the essential elements which were prohibited during fifty years, in this first request, is necessary it to repeat? It is a question of knowing that the Mechanical Universal one is established on a process Perpétuel self-accelerator which has had to be and will be offered to the World, will be prohibited as soon as possible by a way of dictat against the Perpetual Movement since generations and also for these fifty years, and which product a considerable Energy with the image of the galaxy of which it is obvious that current

Science is unaware of still operation, without him to make the reproach of it. Ignorance is not a crime. What is a crime is to dissimulate Knowledge when it is revealed, to account for the reality of the Invention stated in the original Patent, we will discover the Creative Principle hatémien which includes also, the Principle of Conservation, the Principle of Evolution and the Principle of Adaptation, which do only ONE, governed by a process perpetual self-accelerator, which permanently creates its own Kinetic energy for Eternity, and answers of all the physical phenomena. It is thus about a perfectly scientific revelation necessary to the deposit of the initial Patent, and which can only bring in more to the Physical one if it accepts it, the responses with the large problems which were never solved nor clarified, and which would be likely never to be it. It is not a reproach, but that is allowed thanks to the Metaphysics of which all other Sciences are the consequences, and without making call with a divine Creator necessarily, that of which each one will decide according to its proper conscience. Some pages summarized on more than two hundred necessary with the single knowledge of the atom and the planetary system in the most negligible detail, it is the least which one can realize. These features on the Mechanical Universal one were developed in literary works that I write thus that my Frank son, since 1955-56 following twenty years of searches on the Perpetual Movement started in 1935, then thirteen years old in the purpose creating electricity; and because precisely prohibited by the Physical one, which however is obvious within sight of what makes our existence as of all that surrounds us. It is enough to observe and reflect. A cherry tree gives always only cherries, and not of the oranges which push only on one orange tree which itself does not give bananas which push only on one banana tree. Aren't they governed by Perpetual Movements? Of course, it is not a question of mechanical of laboratory; it is necessary to have the intelligence of the difference.

MECHANICAL UNIVERSAL HATEMIENNE

The Principle-Creator, Conservative, Evolutive and Adapter are composed of three combinations exclusively Magnétiques, and which becomes atom and planetary system, therefore Univers, on a TERNARY equilibrium which is explained by these three indispensable components, all connecting the masses between them. 1) The MAGNETIC DUALITY which joins together the masses by their attraction and their mutual repulsion, 2) ROTATION SYNCHRONISEE and SYMMETRICAL of the magnetic poles by spontaneous movement due to their attractive and repellent Duality becoming apparent “gravitation”, but whose repulsion become inoperative, 3) the Orbital motion by Magnétique drive and effect of centrifugal sling of each mass by the other, and of each one around the other, according to mass values', in an inversely proportional way, until the orbital speed and the distance which separate them find in perfect equilibrium with their attraction which results from this distance, (Attraction which takes form “unipolar gravitation” apparently universal). Indeed, all the masses in all the universe function by couples of two elements at least since they must act one on the other, justifying the Perpetual Movement, and without limitation of amount of elements, with the manner of our galaxy which can comprise hundred billion them. It is interesting of knowing that all these couples are independent from/to each other, organizing and living in an autonomous way without direct ratio with any, although sensitized all and sundry by their entourage, (like the human beings). But the destruction of the one, does not involve the destruction of the others as in of other theories, and as the Physical one believes it. With single attraction, it would be enough to burn a match to cause the destruction in chain of all the universe. This system is perfectly stable because TERNARY and irreducible. Its three functions are feasible in laboratory and are available with public in the Seine and Marne

with the Scientific Academy of Rozeille. All these indications on the Mechanical Universal one are necessary to accredit the Inventions presented, because it is substantial to have tangible proofs of their functional reality and their means of performings. The system hatémien allows and justifies moreover, the HARDNESS of the "material", the atoms making block by solidarity between the particles, becoming all resistant to the deformation, either by crushing, or by extension, owing to the fact that it is "almost" impossible to bring closer the electrons the cores, and that in the same way, it is "almost" impossible to move away them, thanks to the Magnetic REPULSION which here, plays a dominating role. On the other hand, they are modulatable according to their own needs; for example in the physical one of fluid, fire, the solders, and others.

PERPETUAL MOVEMENTS

It is in fact indispensable to know that the Universe is governed by PERPETUAL MOVEMENTS of the atom to the galaxy since "last" Eternity and for Eternity "to come", producing its own movements in an autonomous way without discontinuity. But it is true also as the Physical one thinks it, than such a made system of various heteroclite objects: Gears, springs, weight, levers and other accessory of kitchen, must be maintained by an OUTER auxiliary energy with the system; energy which is spent, which is consumed, which wears. It is not a question of that; but is to be unaware of that in the universe, from the most negligible atoms to most gigantic planetary systems, the ruasses are magnets, and all are OUTER the ones with the others, acting by their single Magnetic Dualité remotely, and thus by mutual attraction and repulsion, although constituting autonomous sets, without any physical contact the ones on the others. Thus the Mechanical Seule Universal one can answer of Movement Perpétuel maintained constant average speed by self-acceleration, and for Eternity; it was enough to discover Dégravitation which governs all, in Perpétuelle way in the Mechanical Universal one. Forgiveness, Sir Isaac Newton. It as should be known as it is the Magnetic energy which is the base of all bodies without the lesser exception, and of which they are integrally made up, since more negligible parcel of atomic particle to the most gigantic galaxy comprising of the hundreds of billion elements: UNIVERSE. And it is indispensable in the wording of this deposit, to specify the many details of this marvellous and sublimates Mécanique which could not be in conformity with conventional sciences which do not know all, and whose Engineers of the INPI did not have steps included/understood the nature, for a system capable to produce Energy, copied from Mechanical Perpetual atomic and planetary one. It is not the different one. Gold, it seems normal that Science must teach only the actual one, in spite of the upheavals that that can produce; and it is the case in this new millenium. It is the object of my Patent and this Certificate of Utility, by Knowledge that I offer with Humanity. Stars located in ends of arm of galaxy-spirals slip by in Space at the speed of the light, and much more still according to certain Physicist-Astronomers, to the million kilometers a second. From which would come from such speeds if not progressively, starting from the absolute rest, until the limit noted in Mechanical atomic and planetary one, not on a progressively attenuated initial impetus, and thus contrary to the Big-bang which expanding continual, and would be rejected by very many Physiciens, but on Mechanical intelligent. Also, it is what proposes the Universe, hatémien which accounts for the creative process, in perpetual self-acceleration, subtly limited by orbital movement , with the manner of slings, and thus by Force Centrifuged for Eternity.

KNOWLEDGE.

In addition, peuton to think that the universe is without Cause first, whereas any object has a prior reason with its existence. It is not because it is universe, that it can excluded or be exempted of it, the more so as any object which constitutes it, is him same subjected to this requirement, forming this Universe, since the most negligible apparently physical atomic particle, and whose single existence poses already an enormous problem. From which would this leave particle? Who would have created it? Why? How? In which purpose? It is necessary to answer these questions. It is what we will do. Metaphysics, with or without intervention of which or anything, is thus the Cause first of which very other is a "physical" effect. To reject Metaphysics is thus an error of judgment; one does not separate the Cause from his effect, nor the effect of his Cause. Not more than one does not separate the positive one from negative in Energy. Knowledge is precisely the response with this problem of the origins first of the Universe and its actual operation. Science makes Metaphysics while seeking to explain the Universe which according to any evidence, should not exist. The Chemistry makes Metaphysics by peeling the Atom; and it is necessary to determine of them the exact circumstances thanks to the Knowledge which is not a single belief. It is a certainty, without ambiguity, absolute, indisputable; each one must be able to judge some by its lightness and its logic. Those which know it in are dazzled and filled with wonder. Thus, to include/understand the free producing of energy, it as should be known as the universe is created permanently since last Eternity and for Eternity to come; what makes it possible to include/understand all that results from this, but from the Infinite one; whereas to leave the existing object and to retrogress to include/understand the true nature of it, is a notorious impossibility. It is perhaps more with the span of all, but that only results in being posed the same question unceasingly: Or, WHY, HOW, IN WHICH PURPOSE. Gold, any investigation scientific must start from NOTHING; if not it cannot answer of true Knowledge. It will miss seed always there first; the Blow of Inch of God, as say certain physicists. One could not reproach Physical for seeking the scientific Truth where it thinks of discovering it; but it is erroneous to refute any new solution capable to bring a response to the problem. Gold, this problem is now resolved in its whole, and it is logical now, after the fifty years of "gestation" of Knowledge, period prohibiting any scientific revelation not yet recognized officially and by non a Physicist, to accept the omen of it.

MAGNETIC UNIVERSES

By this Infinite and mental or spiritual Duality, becoming Creative Principe the Universe are created. Is it necessary to be astonished some? Yes of course; but also, to know this Creative Principle which becomes ATOM, That is absolutely marvellous, because nothing should neither Be, nor to exist; and yet, the universe "EXISTS" same if it "IS NOT", and we let us feel only the appearance of it, in the form of SENSATIONS. Which difference with the "material" which could have been, but which cannot it? None? IF! The physical "material" would be unperceivable without direct contact, with the object; whereas single, the Magnetic Duality allows it by attraction and repulsion with outdistances. It is what we will do simulating with magnets the atomic particles or the planetary worlds which produce considerable Energies of which it is absolutely impossible to define the nature without making call with Mechanical Universal the hatémienne which reveals us the secret one. By which miracle, the "material" could attract remotely or push back, if it were not made only this original single Duality since it

results “” from Infinite whose clean Nature is to be DUALITY? … At the same time, NOTHING and the WHOLE, Null, + 5 - 5, + 10 - 10, or ZERO; and INFINITE since unbounded. The Physical one should be aware of it; one does not make the “material” attractive if it is not already made up in itself of this curious faculty to attract without bond itself “hardware”, but also to push back. Could one invent a similar thing? If thus it were possible that single gravity was “unipolar”, it should in the same way produce the EFFECT of material; but that is perfectly impossible, if not by miracle; because for the Physical one, it would be only attractive by GRAVI'Y, and TO BE ONLY THAT. By which miracle could it be consequently Répulsive occasion? And being one, it is imperatively to be the different one. One does not separate the two ends from a string and to have two pieces having each one only one end, which would be the atom of the Physical one. Forgiveness Mr Niels BOHR. And then, to create, it is necessary to be TWO. Single Gravity can nothing generate that the fall of the bodies the ones on the others in the short term; it is enough to play with magnets to realize quela single attraction would be a true calamity. Because in fact, if the planetary systems, as besides the atoms were all in attraction by single gravity, they would be joined together since good a long time in a single mass, informs, like would be BIG CRUNCH before réexploser to reform a new universe. Curious perpetual movement which makes the Physical one nowadays. And then, without intention of critical towards NEWTON, all the systems would count the ones on the others to be maintained in permanent equilibrium; single comparison with the Universe hatémien where the systems are created independently of all the others, an autonomous way, separately, without launching of all the “mass” in the space of some thousandths of second, and under the terms of what?

WHY IS THE GRAVITATION MAGNETIC?

Why the Earth and the Moon attract themselves•they by simulation of “gravitation”, if they attract each other and are pushed back mutually by magnetic duality? Small problem? When one puts in rotations synchronized AND symmetrical the poles of two magnets which normally attract each other and push back, one obtains two magnets face to face which attract each other exclusively without being pushed back, with sixteen times more attraction whatever their relative positions, their distance, their mass and their common rotational speed since synchronized. (HATEM) (2r) 2 /1 While with a single pole in movement, attraction is only four times larger for twice less distance or of approach. (COULOMB) r2/1 It is that which the world still believes to be the gravitation or Universal Attraction according to NEWTON, whereas it is about Magnetic Duality. WHAT BECOMES THE REPIJLSIONS? They should well be placed some hand, these repulsions between the poles NR, NR and S, S; because they are always there, and quite living; or then, to ask them why they appear indifferent to the point not to intervene in this synchronized rotation. Because it is not so obvious to think only these same pole… When they go one towards the other in attraction, act with frenzy, with sixteen times more power instead of four times only according to COULOMB, And lorsqu " they in rotation are synchronized but similar, they are not pushed back and remain indifferent although they did not lose their repellent faculty, Eh well, try to include/understand. It is enough to think of what pass in these synchronized rotations where one realizes that if the poles in attraction move away and bring alternately one closer to the other, the poles in repulsion on the contrary, are held always with the same distance from one pole to another, as if they were joined together by rigid ranging, sometimes going in a direction, sometimes returning in the opposite direction. Gold, with a little reflectance, one can understand that under these conditions, the actions are cancelled completely between the poles which are

pushed back, sometimes moving both in a direction, and both ghost in the other direction with each half-turn, as if it were bonded by rigid ranging. Any action then is cancelled completely as if the repulsion were neutral, but it is always well there, and discrete. This is why when one puts the magnets in synchronized rotation, single the attractive functions remain as we saw, while the repulsions do not play any more any apparent role.

It is the GRAVITATION, thanks to the synchronized polar movements. It should be known that during these synchronized rotations, two of the four poles in attraction, only one North and only one South approach simultaneously and symmetrically one the other, attracting oneself with the same energy as if the four poles were face to face in rest state, and parallel, in "closed" circuit. Twice more way by each pole, sixteen times more attraction. To the same instant the two other poles move away symmetrically and simultaneously one from the other while "being dégravitant", without slowing down itself until the four poles are on a straight same line or a same plane. Thus, two poles which attract each other are facilitated in their movement with each half tower, by the two others which are in degravitation and which does not slow down paso ermettant the acceleration of two récédents him go back to their tower as soon in degravitation to each half-turn, while the two others which were in degravitation go back to their tower in attraction, alternately. It IS THAT MOVEMENT PERPETUAL AUTOACCELERE According to Law of COULOMB which is exact and that I confirm by my clean experiment, when two poles in attraction are face to face, of which one is fixed, and of which the other is in movement, attraction is four times stronger for twice less distance which separates them. r2/1 = 4 BUT, if the two poles approach simultaneously one the other, the distance which separates them finds spontaneously reduced twice rapidly like front a mirror, and attraction is then multiplied by SIXTEEN instead of being multiplied by four. According to Hatem: (2 R) 2/1 = 16 Sixteen times more attraction. And that answers exactly the fact that the two magnets also attract each other them with sixteen 2nd times more attraction when the four poles are face to face "in closed circuit" and immobile. It is subtlety in simplicity. It is complicated? But without a little working, there is not point of pleasure. That they are two poles attracting with sixteen times more force, or four poles attracting each one with four times more de_force, the result is same the 3 A each half rotation, the poles reverse their functions. Those which approached start to move away and are dégravitent, while those which moved away start to approach while accelerating with their tower.

OF the OFFICIAL CONFIRMATIONS

Thanks to the Lawsuit in Call which took place on May 18, 2006, it are to be hoped that the INPI had the confirmation by their young Lawyer, of the reliability of my performings which it had not included/understood or had not accepted on the wording of my Patent of 2001, and which he is good to specify for magnets in synchronized rotations which were not supposed to produce energy according to a anti-perpetual pseudo-scientific dictat. All those which read our works, included/understood them by their evidence and their simplicity; but was necessary it to attach some importance to it and not to be Physicien. It should be known that Physical the, same one if it is a honourable profession, is not "the Knowledge" which is Métaphysique, bases first of any Creation. In the magnet system utterance in the Patent with two synchronized magnets, the motor of the primary magnet cannot accelerate indefinitely, it is satisfied to be used as tutor for a limited rotation. And in fact, the two magnets turn to the same speed of 3500 revolutions per minute, according to the regime of the motor at empty, making that the DOUBLE system the

energetic power of the unit, providing with only one secondary magnet, TWO of the same motors useful power. With two secondary magnets, THREE of the same motors useful power. With three secondary magnets, FOUR of the same motors useful power… In theory, without limitation of amount as in a galaxy. D'ailleurs, it is not there question of Perpetual Movement as in the empty spatial one where the masses are in suspension, free their mutual functions, the difference being also that the planetary masses as in the atoms, are at very large distance, and are put in mutual orbit controlling the rotational speeds, which is very different our magnets which work to very short distance, and without orbital motion. But new technology allows the largest hopes. It is the orbital motion which limits the self-acceleration of the rotations in the universe, if not until where the speeds would go if they were delivered to themselves without any means allowing the automatic limitation of the accelerations. In that, we can be in admiration in front of this superb Mécanique endowed with curious Intelligence. It is astonishing that the Physical one sees only one incidental impetus there or the masses would be put in stable orbit by unexpected meeting which would be very natural, without intelligence. Gold, whatever this Intelligence, and from where that it comes, it EAST. As what the Physical one cannot be allowed to reject arbitrarily what is capable to help it to include/understand Ajoutons that this Certificate of Utility does not constitute a deposit for a Perpetual Movement, but for a complementary contribution with the Patent 01 08712, and for a new technology.

SYNCHRONIZED MAGNETS AND POWER GENERATION.

Thus, when the magnets are in symmetrical synchronized rotations, the poles which are in attraction precipitate simultaneously one towards the other, while with the return, they move away in the same way while being dégravitant, and in other words, WITHOUT SLOWING DOWN. From where they produce twice more energy than they do not consume any, although they are attracted with four times more force on the one hand, and are slowed down with four times less force on the other hand; but they work at double distance one of the other. That is impossible into physical because of the ignorance of the Universe which product its own Kinetic energy in each atomic or planetary couple, in permanence, and which would be rebuilt starting from the absolute rest if it were stopped.

The ORBITAL MOTION IN UNIVERSE

It is necessary moreover consider that the rotations in space, can reach colossal speeds without any embarrassment, parasitic vibrations or disturbances, considering especially that the masses can be very different and are organized by mutually putting in orbit the ones by the others and the ones around the others without any constrained thanks to their magnetic relationships, and in a way inversely proportional with their respective mass, which confirms the conventional theory by the universe hatémien, and what spontaneously limits the acceleration of the rotations to constant average speed for eternity. But also, that tends to confirm the Newtonian universe who is supported on the same mathematical ones. Here we are; metaphysics hatémienne and the Physical Newtonian one meet, which is quite normal. Without any initial impetus, the masses are placed thus at the good distance, progressively sent in space by their mutual magnetic field, to the manner of slings, in TERNARY equilibrium according to Mechanical the hatémienne, following the Plane of the Ecliptic, for eternity, from where NEWTON could establish a perfectly mathematical BINARY “principle”. The opposite one had been astonishing. It is

substantial to consider by the term “creation”, the permanent producing of the Universe in a PRESENT eternal, which, by corollary, makes that the Universe is eternal because CREATES without discontinuity, since the night of times, and for eternity to come, by a Cause which single, is eternal: The Magnetic energy whose true nature is to be the Infinite one. That is explained clearly, but it is enough here to admit the fact, remaining of it at the disposal of any person interested by thorough knowledge of Mechanical Universal.

This precision, for curious that it is, is perfectly intelligible and justifies the Perpetual Movement in the built Universe of Magnetic Duality, without what nothing “would exist”. That does not mean that it is possible to carry out an atom or a planetary system artificial, which one should not confuse with the artificial satellites which are aircrafts which turn around the Earth, and which are provided with powerful computers and gyroscopes, and resting on their speed orbital instead of resting on the atmosphere. They do not have absolutely anything to see with the Moon which counts only on its Magnetic Field, and not on the Earth which itself does not rest on nothing other but on its Magnetic energy in connection with that of Moon. It is somewhat; and it is where the HARMONY of the rotations plays an indispensable role to avoid their mutual fall since billion billion years or millenia. But, let us see what it is: PROOFS IMPOSSIBLE TO CIRCUMVENT: SYSTEM TERRE-LUNE FOR EXAMPLE Without entering the menu detail, the system Earth-Moon is a formal proof of the symmetrical synchronism of the magnetic polarities. Because it is enough conclusive that the Moon which watch always the same face with the Earth, and in the same position, is led in its tour, by the magnetic poles which play with those of the Earth by synchronized functions which are found permanently every twelve hours for the Earth, with those of Moon in 12 hours 50 since it takes delay on the terrestrial rotation, involved in orbit by the single magnetic field. It would be absolutely impossible with an attraction of the “revolved” kind which would not prohibit Moon from modifying its position on its orbit under various angles while falling on the Earth or moving overall in any direction. The proof of the double polarity of the Earth and Moon in constant relationships, is that the Moon balance in exposed movement LIBRATOIRE by GALILEO without knowing the reason of it, with the poles of the Earth, sometimes attracted by a pole, then attracted by the other pole every twelve hours, whereas it did not have time to make a complete half-turn, because of the lever arms on the poles which are very close to its axis of rotation. But also, when the Moon leaves its orbit to move away or approach twenty thousand kilometers the Earth, it always joined its position on its orbit systematically and in the same position, seeking the “plane of the ecliptic”, this which peremptorily proves that the Moon and the Earth are in magnetic relationships and not only gravific, which would not answer of such an enthusiasm to find their position without derogating about it, function of their double mutual polarity, in spite of some variants due to the influences of other planets. And let us not forget that the Earth turns also in orbit around Moon, which can occur only by one intelligent and nonincidental and unexpected link which would make following an abrupt and uncontrolled impetus. Moreover, if it were possible to send the Earth and Moon on a same impetus, they could not in no case to turn one around the others but only to continue their launching with the same speed, by conservation of the energy according to the Physical one, remaining constantly in the same position, except namely that they would be in gravific attraction and that they would fall one on the other without remission. For information, it should in addition be known that the Moon is not only in attraction with the Earth, because when it tent to move away, it is attracted with MORE “attractive” force, and pushed back with LESS “repellent” force, which watch which the repulsion is always active in the orbital motion. And

when it tent to approach the Earth, it is pushed back with MORE force repellent, and attracted with LESS attractive force, going up on its orbit. That allows the mechanical stability of the Earth with Moon, each one around the other, and to maintain it "perpetually" constant, why not eternal. This curious phenomenon of Mechanical stability of the systems as well atomic as planetary, and which can surprise, comes owing to the fact that the poles from the masses which normally must be synchronized symmetrically, are periodically into slight "desynchronism" by "angular deviations" of the polar movements coming from the positions of the stars compared to the PLANE OF the ECLIPTIC, explaining the LAWS OF KEPLER. To meditate closely, as I did myself and included/understood. With the requirement, to make the graphic ones or on application. Extraordinary INTELLIGENCE of the Creation which gives rise to think that the "Material" is endowed with CONSCIENCE. Let there be no misunderstanding; there is Conscience in the Material; and it is Métaphysique, nonconscious of its state. And yet it acts as if it were endowed with reflectance, which contributes to the Evolution and the Adaptation; and that, thanks to the Magnetic Duality by the Principle-Creator. Us it soaps since fifty years, proofs with the support; and us soaps also that it is the material which is born from the Conscience, and not the Conscience which is born from the "material". But of course, the "material" is not physical; it would be impossible; it is Métaphysique; and the Conscience is already "inclusive" in the Magnetic energy.

The SUN

The Sun is a vortex of magma, far from being a self-checking nuclear reaction, like are also the other stars. Fortunately, because that gives him an almost infinite existence and risk not to explode. Its rotation is 25 days at the equator, 27 days with 45 of lattitude, and 35 days with the poles; formal proof of the rotation of the solar core which turns much rapidly to the center of the magma, which justifies that the Sun is a world bubbling and swirling without there not being the lesser fear which it does not destroy by carelessness or forgetting. Its core which is a magnet must necessarily turn in 24 hours or same in 48 hours, if not it would not be in state of gravity with the Earth and other planets, by their polar synchronism, or very approximately, taking into account the orbital motions which produce apparent variations of the rotations with the magnetic poles of the ones and others, as the taken Earth for base of frequency of our galaxy, because its core turns like the bark, of 24 hours. Thus, all the masses are SYNCHRONISED by their magnetic poles of 24 hours, and of this fact in gravific "appearance". . With variants by multiple or submultiples of TWO according to the importance of the relative masses. The essential one being that the poles are found constantly in phase, if not, not of cohesion in the system, which explains why the polar relationships are indispensable and build themselves besides spontaneously without being able to derogate from it. A mass which turns on itself, involves the other masses automatically to be turned in synchronism, or simply, to be put in vibration, or only in magnetic relationships without actual connection, and until the infinite one. It is obvious that the central core of the Sun turns much more quickly than its magma. What could justify of it if it itself were not involved in its rotation by the rotation of the other elements of the galaxy, and by magnetic field, if there were not remote ACCELERATION by the rotation of the other masses of the galaxy since billion billion millenia if not more, since the night of times, and consequently, by revolving EFFECT? Thus, all the galaxy is in magnetic connection by each one of its elements which constitute it, although they are apparently independent and autonomous. In ours which perhaps contains hundred billion stars and planets, all the masses are in relationships of

the magnetic poles, and rotation the ones towards the others, of which our solar system. Think there when you contemplate the celestial arch; you will discover the UNIVERSAL HARMONY. And it is superb!! the GALAXIES All our galaxy must thus have the same frequency which our solar system, of 24 hours with the level of the planetary and stellar cores, normally like the Earth, taking into account the stellar and planetary positions in orbital rotations and which can be somewhat different, function of the relative positions of each mass on its orbit, as the Moon of 24. 50 compared to the Earth, and as MARCH which turns in 24 hours 37 on itself, considering that it spends two years to make its tour around the Sun. Each galaxy has its own frequency, like each individual or each atom. Could Io Comment a SINGLE initial impetus answer of all these frequencies which amount of incalculable numbers of billion specimens both for the atoms the planetary worlds? This is why it should be become aware that the "material" builds place in place progressively, independently of the entourage, and living in autarky without requiring anything of its adjacent, and by Perpetual Mouvement. How can one only imagine that it is otherwise? If not all the systems would count the ones on the others to be maintained in equilibrium, and the most negligible atom would be responsible equilibrium of all the universe. But fortunately, the Principle-Creator hatémien is there to reassure us.

DEGRAVITATION AND PERPETUAL MOVEMENT.

It is indispensable to specify all that to justify these deposits of present Patents and to come which use this exposed phenomenon in MAY 1955, and which allows the free producing of Energy by the synchronized and symmetrical polar rotations, thanks to the attractive poles only, in our apparatuses. The poles in repulsion can nothing "overproduce", because they act contrary to the poles in attraction which single can create on-unitary Energy. The repulsions remain however indispensable to ensure the equilibrium in the system stabiliser of the atoms and the planetary sets which function on same Creative Principe. It would not know to have two Mechanical also sublimes the repulsion can also be used for in our apparatuses producers of on-Unitary Energy to maintain là-aussi this equilibrium in the polar synchronism, by obliging the poles which are pushed back, to preserve the same distances like compressed springs, and in order to facilitate the symmetrical synchronism of the rotations as if they were bonded by "rigid" stems.

That shows that when two poles are in symmetrical synchronized rotations, the poles which go one towards other accelerate, while the poles which move away one of the other are released mutually by Dégravitation. Thus, the Principle deposited in the Patent 01 08712 consists of semi whole a "magnetic" provided of an unspecified motor which makes turn a dipole provided with soft iron flasks, rotary in symmetrical synchronism with another of the same dipole invoices. When the motor turns, it involves only one of the magnets in rotation using one average unspecified, and the secondary magnet starts to turn in symmetrical synchronism with the magnet motor in progressive acceleration to 3500 revolutions per minute for each one, the rotary secondary magnet by single magnetic induction with the primary magnet, being coupled with the wheels colouring a tractor weighing 25 kg, and being able to carry an additional load of 25 kg out of post a coast with 5% or supposedly 100 kg approximate on flat by coupling the primary magnet with the wheels. Because the primary magnet-motor turns to empty. At all events, the Tractor product an opposite on-unitary Energy with the Physical one. It is possible to add as many secondary magnets according to requirements', with the unit, and all these magnets are put

normally in rotation at the same speed, and produce each one the same energy as the magnet motor, as in a galaxy, and being added to the whole without consuming additional energy, since each one becomes the motor of following and double the power of this one, which is the same one as that of the primary magnet, thus multiplying the energy of system. It will be necessary well that that is however accepted, and the Court in Call of May 18, 2006 the based good of my Invention recognized to have noted the fact with my tractor and my galaxy which comprises fifteen magnets in rotations synchronized which turn in spite of various brakings, without any additional expenditure of supplied energy by the magnet-motor. That is to say 43 milliamperes at the beginning (small motor of clock industry) with only one magnet; and 43 milliamperes unchanged with the fifteen magnets in rotation, each one resistant with voluntarily caused braking and preserving its energy without stopping, now the synchronism and the rotational speed. But I am returned in Cassation by vice of form to have omitted to specify my date and my place of rise. Then, to follow.

OF THE GEARS BY MAGNETIC DISCS.

This Certificat of Utility is not limited to supplement the Patent 01 08712 in order to make it more intelligible; the purpose of it is also presenting a balance of extremely effective inventions allowing inter alia compensating for the mechanical gears by magnets in order to make them everlasting and of high safety. For example for the startup of certain systems, and while creating a more powerful energy necessary with the drive of various machines. It is necessary for that to preferably use nonmagnetic discs of material but without exclusive, on the circumference of which are attached powerful magnets and enough brought closer from/to each other, in order to produce various gears whose “teeth” are replaced by these magnets. These discs form uninterrupted continuations of attractions in relationship .avec of the discs of different polarities which face them,

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FR2826800

Semi-magnetic motor for producing supplementary energy, comprises two adjacent magnets which rotate in synchronism in opposing senses such that one magnet is driven and the other produces energy

Abstract

Two magnets (A,B) are able to rotate about parallel axes and rotate in synchronism and opposite senses. The synchronism may be ensured by the engagement of wide gap toothed wheels on the magnet shafts. One pair of North and South poles gets closer as the corresponding pair become further apart and this causes supplementary energy to be available from one magnet when the other is driven

SUMMARY OF DESCRIPTION

The purpose of the present invention is particularly, by a combination of couples of more or less

powerful magnets according to the use wished, of which one only is pulled by a motor, to allow all the other magnets then actuated chains of them by magnetism the ones by the others, to provide a " free " energy additional to consumption of the aforesaid primary motor unspecified, and functioning according to Mechanical Universal " the hatémienne " established on a TERNARY equilibrium. Mechanical universal the product thus its own Energy Kinetic in the atom as in the planetary system; because it is obvious that the universe could not be perennialized following an abrupt and accidental impetus, but only by one " intelligence " either divine, or purely mechanical, but fundamentally intelligent.

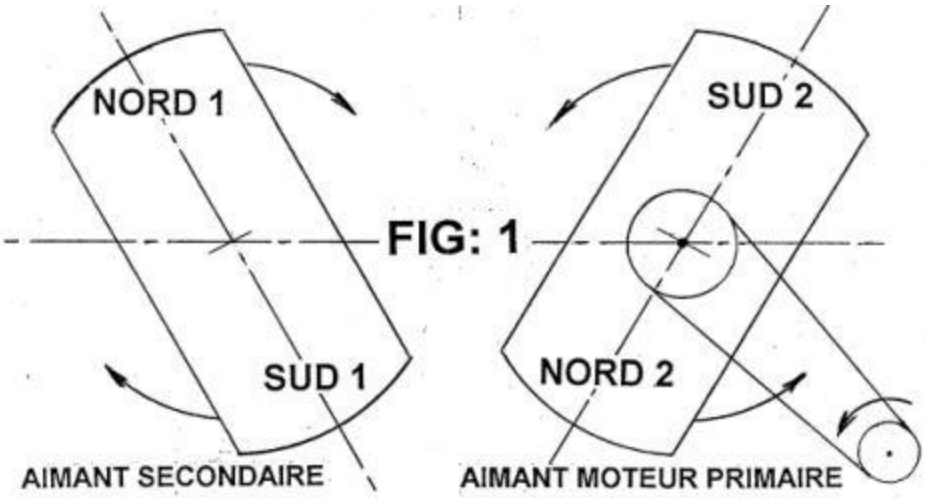


FIG: 1

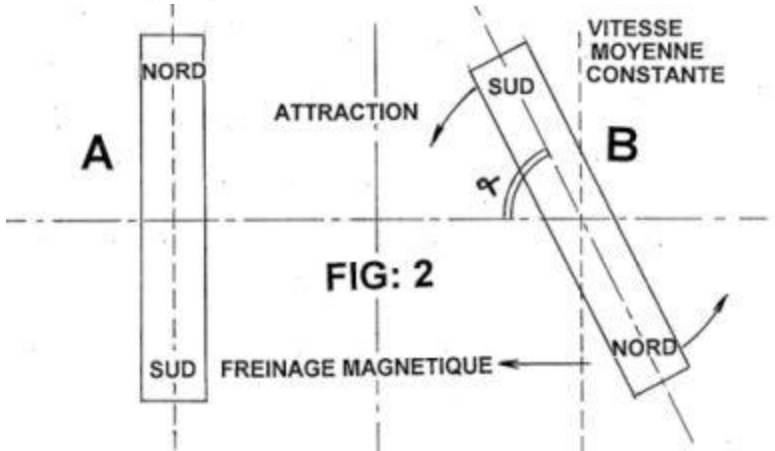


FIG: 2

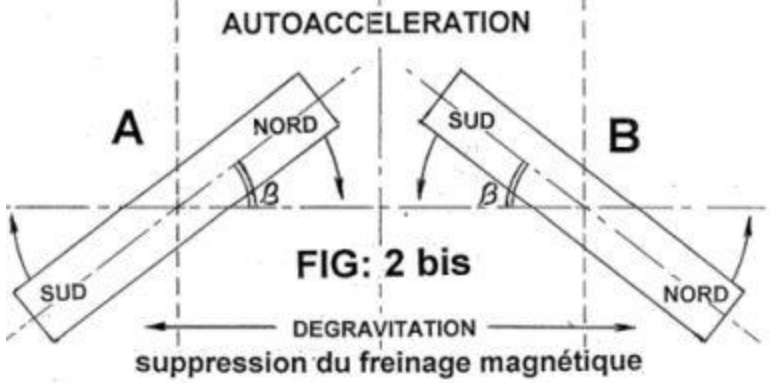
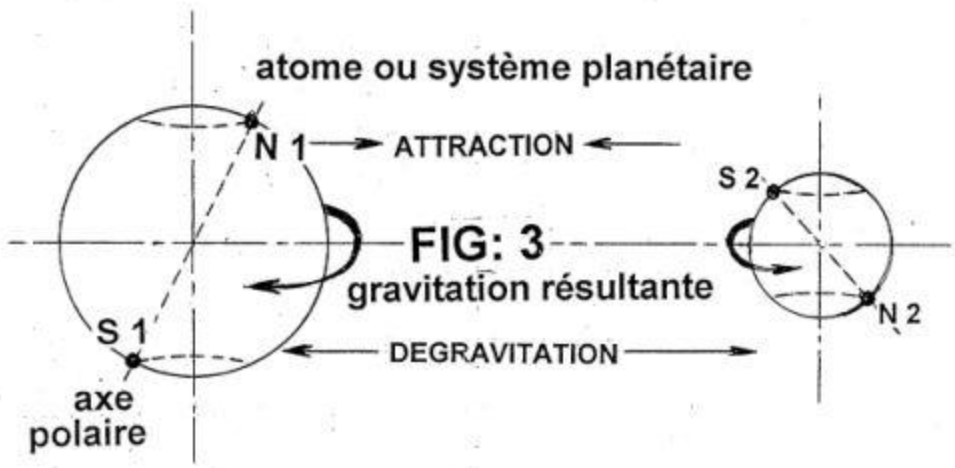


FIG: 2 bis

suppression du freinage magnétique


atome ou système planétaire
N 1
ATTRACTION
S 2
FIG: 3
gravitation résultante
N 2
S 1
DEGRAVITATION
axe
polaire

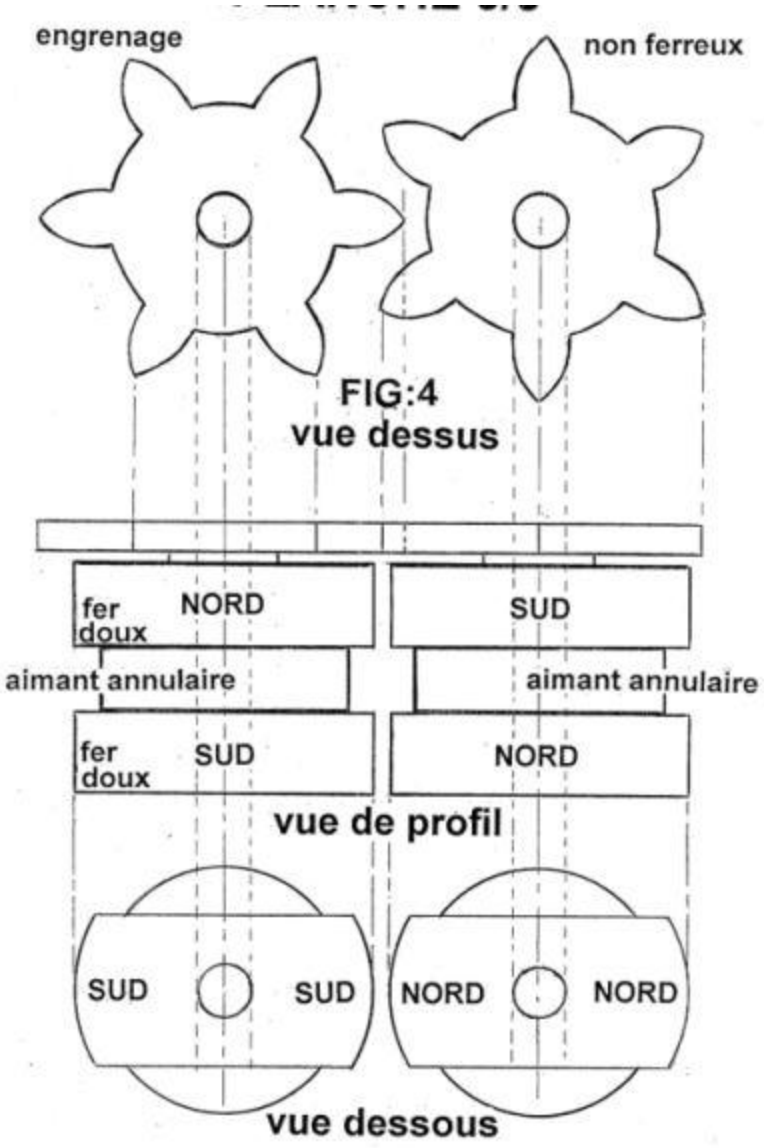
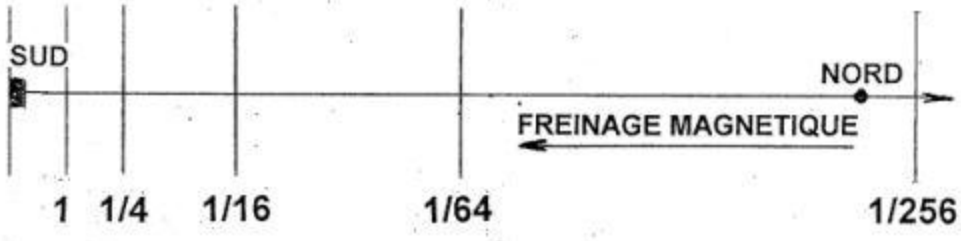


FIG: 5



PREAMBLE

To admit the reality and the cogency of this apparently debatable method of the viewpoint of Physical conventional, and yet feasible in laboratory, it is thus indispensable to specify that it is established on a PRINCIPE-CREATEUR, CONSERVATIVE, EVOLUTIVE and ADAPTER which governs the universe by this TERNARY system with three components, which single allows an irreversible stable equilibrium. But, that this phenomenon is copied or not from the Mechanical Universal one, it is less exact than it product an additional kinetic energy, object of the present application of Patent. And, of course, it is not 1 comparable technical viewpoint, with the Newtonian universe which apparent with an equilibrium BINARY since reduced with two components only, that is to say: 1) GRAVITATION or UNIVERSAL ATTRACTION, 2) The Orbital motion, fruit of an accidental initial impetus.

But this system is according to any likelihood, the consequence of the foregoing Principle-Creator utterance whose three components are:

1) ATTRACTIVE AND REPULSIVE MAGNETIC DUALITY, synthesized in the magnet as in any other mass, including the atomic particle or star,

2) the HARMONY or SYNCHRONISM of the polar rotations by couples or with several masses, synthesizing the GRAVITATION or universal ATTRACTION in all relative positions,

3) The Orbital motion by magnetic drive of each mass around the other, and around the center of gravity of the unit, by centrifugal force.

The orbital motion is necessary to ensure the stability, the cohesion and the autonomy of the systems forming the universe. It is wise to specify here, that the Mechanical Newtonian one is in fact a mathematically exact summary of this Principle-Creator into fine of formation of the atom like planetary system, where the gravitation results from the synchronized polar movements, and of which centrifugal orbital speed pulled by magnetism equilibrium exactly the aforementioned attraction.

It is the single possible equilibrium for free magnetic masses in suspension in space and allowing an irreversible mechanical stability. It thus should well be considered that viewpoint of physical conventional, to produce Energy, that " seems " still impossible; but it should also be known that science in is always to seek secret atom and planetary system of which the enormous speeds relatively with the masses considered, remain to him unexplained in spite of three hundred years since NEWTON on the Mechanical Universal one, and with the more recent theory of BOHR on the atom, although Nobel Prize. Also, whatever the creative process of the universe, ignored academic science, us prions I. NR. P. I. to agree to regard as perfectly justified, the present proposal proven experimentally using scientific but new apparatuses and as of now consultable with the Palate of Knowledge with PRESLES IN BRIE.

HE OPERATION OF MOTOR SEMI-MAGNETIQUE.

The process accelerator is of course, exclusively magnetic. It is necessary thus to use magnets and anything other, single power source acting remotely without another bond hardware, and

thus without detrimental mechanical strength, others that the ball bearings and the ambient air, and functioning by couples, as well as a motor which can involve one only magnets in rotation with a constant mean speed, manipulated the frequency of the unit.

Thus, in our proposal (simplified couple), the primary motor maintained by a current energy which feed it, product with normal speed a certain working like usually, and involves remotely, another magnet dipole and thus provided its double attractive and repulsive polarity, with a certain rotational speed, and which him, will produce this additional kinetic energy. :

The PROCESS ACCELERATOR

Let us suppose two bar magnets: One of them, A is stationary, the other, B is in rotation on its central axis. : 2 Such as present this model, the magnet B turns virtually at average constant speed in the direction of the arrow, in average equilibrium equivalent of brakings and the accelerations respectively by the two north poles and SOUTH of A.

But let us suppose that as of the indicated position on the drawing, magnet A is put also and spontaneously to turn on its axis, symmetrically with B. : (à). We see whereas the NORTH one of A decreases the distance compared to SOUTH of B which thus accelerates its speed of approach towards NR of A by increase of the attraction. (NEWTON) But also, we see the SOUTH one of A and the NORTH one of B which move away simultaneously one from the other, spontaneously doubling the movement which separates them and decreasing attraction between these two poles. Thus, the NORTH one of B is released by the SOUTH one of A and reciprocally by increase of the distance and reduction from the attractive force, decreasing thus braking, and each one releasing the other pole.

Gold, Si each bar magnet turns thus in polar synchronism with the other by its inertia, we note that if a pole is released, it is the same for the other; and whatever this release, the acceleration is produced by the poles which them, approach simultaneously. This is perfectly expérimentable.

In our system: 1 the second permanent magnet, relatively comparable without exclusive, is laid out with some distance of the first, but from which the poles are only distant from some millimeters so that they do not put in contact the ones with the others; and also in order to draw maximum energy of it, because the magnets must work at low distance preferably. With large distance, they become less effective, whereas in an atomic or planetary system, the very large distance is indispensable so that as of the whole first movements the rotating inertia of the masses is larger than the force by which they attract each other, and which these masses can continue their rotation without retrogressing by “magnetic” braking. : 3 Moreover, the most effective acceleration can occur only if the secondary magnet remains in polar rotation best synchronized with the magnet-motor. In this connection, it is sometimes necessary to maintain this gears magnetic by addition of mechanical gears to very spaced teeth, but which can bring back the poles opposed in position face to face most precise possible during unexpected shifts or strong resistances. : 4 a flywheel can also be adapt with the magnets so that they are not disturbed by parasitic resistances, and especially so that their rotating inertia is upper with the attraction of the poles, which is of primary importance to produce the excess energy; (useful restoring); because in the opposite case, they could be desynchronized, eliminating any

possibility of profit from energy, and from where the advantage of the already quoted gears.

The flywheel can be possibly eliminated, compensated by a very large rotational speed which makes some, plays the same role, using the inert mass then of the aforesaid magnet like flywheel. It is also useful to specify that in the principle, the magnet-motor itself is pulled by this secondary magnet thanks to the polar synchronism; but that does not allow pacs for all that to remove the energy of maintenance, the primary motor being the base of average frequency indispensable to the harmony of the system.

In addition, It can be useful to envisage a possibility of adjustment of the distance of the magnets in order to avoid too abrupt functions of attraction per too much approach. But it is as necessary to consider as the more isolated the magnets are, the less the energy collected is large. That can be necessary for certain applications: Motor vehicles for example with spacing of the magnets at the moment of braking, by a disengaging, or other.

This distance is besides indispensable to allow the mounting of the magnets in the course of manufacture of the various couples of large powers.

NR. B.

The number of the secondary magnets can vary considerably, (as in a galaxy), because they all are pulled by magnetic synchronism exclusively the ones by the others. They thus do not consume any energy, but they produce some, each one of them also actuating the magnet-motor which does not make exception, and each one facilitating the rotation of all the others. However, such a mechanical system could not be compared totally with that which governs the universe, because in an atom as in a planetary system, the masses are at very large distances from/to each other; while in our system, it is necessary to be satisfied to use the process accelerator which is the synchronism of the rotations, working at low distance from the poles, with addition of motor-primary which single can maintain the average frequency and the synchronism in order to create the additional energy. : 1. Prototypes are at disposal. See further.

To note also: A method makes it possible to lay out the magnets so that the four poles are in " closed circuit ", with low distance, 4, which allows a power much higher than when two opposite poles are single on line. 1. The magnet used is then annular with a polarity on each face; but it is not imperative according to the desired use for low powers: Plays, animated showcases, etc, and working at larger distance (a few centimetres or more according to the desired power of the magnets).

OPERATION

When the primary motor starts, the magnet-motor puts him-also to turn on its axis which can be the axis of the motor itself. Consequently, the very near second magnet, is involved in synchronized rotation of the poles, just as in the atom or the planetary system: (masses at very large distances). The synchronism is inescapable and spontaneous; but the starting of the primary motor must be if possible, relatively slow so that this secondary magnet can acquire the same speed without clash and overcome its own inertia which could prevent it from starting with its

turn. Also, it is necessary let us recall it, to furnish each magnet with gears with very spaced teeth as it is said higher, and which prohibits the desynchronism by starting violate of the aforesaid primary motor. : 4 very spaced teeth allow a larger freedom the rotational motions, by avoiding the contacts between the teeth of the gears of the two magnets; its advantages are to avoid the unexpected desynchronism of the polar movements in the course of operation, like ensuring the safety of the spontaneous resuming of the rotations synchronized after braking, particularly for the motor vehicles; but they can also be used for to transmit another rotational movement for additional use. It is also possible to assemble them on springs enabling them to turn partially on their axis and to take again their initial position after launching.

It is the second magnet who constitutes itself particularly a " motor " which works in agreement with the first by magnetic functions, and which product an additional free energy. It is the same for all the magnets used in one coherent same set, each one accelerating all the others, also by magnetic functions.

But single the mechanical capable one to produce its own kinetic energy in each point of infinite by the single magnetism is that of the atom and the planetary system, except the artificial satellites. Also into physical, it is not question producing nor to reproduce such mechanical artificially which would be dépouvue of a conventional energy of maintenance; and let us recall that in our system, it is not absolutely necessary to use the process accelerator which is the HARMONY of the rotations by magnetic fields, and a primary motor which maintains the frequency indispensable.

NB: In a planetary or atomic system, this motor does not have any reason dêtre, because the polar harmony product spontaneously because of the conjugate rotations of the orbital motions, and which adapt mutually according to the acquired speeds by each member, the opposite poles finding itself spontaneously vis-a-vis vis-a-vis each demitour, and in all relative positions, to note that they are the cores of the masses which are synchronized. (Mechanical Intelligence of the Principle-Creator).

The TECHNICAL one thus Let us suppose two magnets in rotations synchronized of the magnetic poles: See 1. We see that two of the four poles approach simultaneously one the other, while the two others on the other hand, move away in the same time.

The two first, NORTH the 1 of A and the SOUTH 2 of B, attract each other without possible discussion.

But we suppose according to NEWTON, that if one of them is stationary, and that the other approaches single making the half of the distance which separates them, attraction is then four times larger.

Gold, they approach simultaneously one the other, which watch that for a simultaneous movement of approach of these two poles NR 1 and S 2, the way traversed by each pole is spontaneously doubled. Thus, attraction is either four times, but sixteen times larger between these poles in the same time.

It IS the FORCE ACCELERATOR OF the ROTATION now See the two other south poles 1 and NORTH 2 on the other hand, which simultaneously move away one from the other. Gold, for a single N2 distance, traversing the half of the distance, the attraction is four times lower (NEWTON); but also, its speed of distance is slowed down by the presence of the stationary pole S 1 which retains it, the more so as the pole N2 must traverse progressively sailed round regions length where attraction by S 1 is nearly constant, this speed being thus reduced of four times its value. : 5 On the other hand, if the pole S 1 moves away also in the opposed direction, and simultaneously with the pole N2, the distance is spontaneously Twice larger for the same way traversed by each one, and in this case, attraction is being reduced either of four times only, but of SIXTEEN times on each pole.

Way, while being reduced by four by always persistent attraction, the speed of distance of S 1 and N2 is spontaneously and simultaneously four times larger for each pole since braked with SIXTEEN times less attraction enters the poles.

Thus, the speed on the one hand being divided by four by the presence of the opposed pole, and on the other hand remultpliée by four by the simultaneous distance of this same pole, each one of them is spontaneously released by a distance twice larger thanks to the symmetrical synchronism of the rotations. BRAKING is removed. It IS the DEGRAVITATION In short, that results in a conjunction of two laws which combine, one slowing down the speed of the pole which moves away, the other restoring it spontaneously.

The LAW OF DEGRAVITATION

These various demonstrations are indispensable, which justify that two poles in attraction can be released from their attractive effect by their mutual distance and simultaneous It is in fact a phenomenon which product when two opposed magnetic poles, NORTH and SOUTH which are normally in attraction, move away simultaneously one from the other by their inertia, with speeds inversely proportional with their respective “mass”; actually with their magnetic “load”.

Thus, between two poles of relatively different values which move away simultaneously one from the other, lowest must move away with a speed relatively faster than most powerful. Twice lower, twice rapidly.

The " degravitation " is thus not the suppression of the attraction; it is the suppression of magnetic braking between two opposite poles which move away one from the other in the same time.

We note that this curious function is a compromise between the Law of NEWTON and the law of braking which combine mutually on the basis of twice simultaneously the reverse one of square, one producing braking, the other eliminating it spontaneously One can add that the DEGRAVITATION product thus contrary TO the CROSS-SECTION of Twice the clean movement of each pole.

These observations make it possible to include/understand the cogency of the present application for a magnet system in rotations synchronized of the magnetic poles, whose two poles accelerate

one towards the other, while the two other poles on the other hand, allow this acceleration, and without it not being necessary to enter the mathematical subtle ones.

Two poles precipitate one towards the other; the two others move away, facilitating the movement of the two first; the rotations accelerate. And, whatever the called upon “laws”, that they are of NEWTON, MAXWELL or others, it is indubitable that the rotations go more quickly, producing an unexpected but actual energy, object of the present application of Patent.

FOR INFORMATION: The semi-magnetic motor is thus established on the process accelerator, conservative and thus of permanent maintenance of the universe in which each COUPLE of masses, whatever are dimensions, of the particle to star, product its own Kinetic energy, its own movement by the single magnetic field, without another intervention. : 3 Gold, it is enough to place at large distance in space, two or several provided masses of their double attractive and repulsive polarity, so that these masses are put spontaneously in rotations on themselves by mutual magnetic drive, and the ones around the others, without the lesser initial impetus, to form one or more coherent sets, and moreover in stable dynamic equilibria because " ternary " and for eternity.

That prohibits by no means that Mechanical NEWTON and the atom of BOHR, apparently stable BINARY equilibria, is exclusively mathematical viewpoint, relatively valid because corresponding ones with the reality of the Principle-Creator where the masses are in synchronized polar rotations.

It is unnecessary to establish the mathematical complicated ones to discover and include/understand the direction of them; but it is obvious that when two poles simultaneously approach or move away one the other, the established laws for the single distances which separate the poles can be to be very different viewpoint of the results according to circumstances'.

The purpose of these long demonstrations are accounting for the various points of details of the system autoaccelerator which allows the together-motor producer of kinetic energy of which it is question in this patent application.

The present invention rises thus from Mechanical Universal the hatémienne in which the atom as the planetary system produce their own kinetic energy with all the levels, as well as the universe in its entirety. Gold, and in addition, it is demonstrable in an irrefutable way which it is nothing in all the universe, which is not magnetic dualistic, including what pass to be the ETHER grain which is not other than a magnetic duality OF the DOCUMENTS IN PROOF As an indication, an apparatus colouring a formed galaxy only of sixteen magnetic members distant from six centimetres makes it possible to note that all the magnets are put in travelling rotation with the poles of only one magnet pulled by a small motor.

This last rotating with uniform constant speed constitutes the BASE of FREQUENCY of the system, just as in an atom or a planetary system whatever it is, where each one appears by its base of frequency. Besides that constitutes the HARMONY in the universe; but each system substantially has its own frequency for eternity.

A PLANETARIUM also accounts for the rotational motion of planets around the Sun and their orbital motion per magnetic drive exclusively.

Another magnet system in rotations watch that there is power generation when the magnets are in spontaneous polar synchronism, which they cannot avoid. And better still, the magnets in synchronized rotations are in gravific attraction whatever are their relative positions, whereas however they all are provided with their double attractive and repulsive polarity, and produce a free energy.

SUMMARY AND CONCLUSION

It should be known that when a magnet turns on itself, or if it vibrates for an unspecified reason, ALL the magnets which are with vicinity, but also those which are at very large distance and "until" the infinite one, put themselves in rotation or vibration SYNCHRONISEE with the polar movements of the first, without consuming and same being able to produce energy, SOME POSSIBLE APPLICATIONS Also, is it possible to extract the single process accelerator of such magnetic systems for the practical use for all industries, and particularly for the transport vehicles of all natures, and thus, to carry out saving on the various fuel and other power sources: electrical batteries inter alia, gas, etc, as well as the muscular energy with the bicycles for example, although the complementary magnetic system of energy input is still very heavy in the current state of the mass of the magnets and the support. More than ten to fifteen kilogrammes for a bicycle. A prototype is at disposal for automobile. The semi-magnetic motor also makes it possible to consider a strong reduction in the pollution due to hydrocarbons, as well as the harmful effects by the noises. Factories, highways, railway tracks, etc At the hour of the electric vehicles, it is interesting to design the automatic recharging of the batteries without additional expenditure of current in the course of use, while placing on the axis of each secondary magnet a dynamo suitable of six or twelve volts, and connected into parallel in order to reaching the useful power of recharging, thus allowing the prolongation of the autonomy of the vehicle. It is also possible to use batteries directly supplying the vehicle engine with the supplied current by the dynamos, in complement of that of the batteries, without however removing them, would be this only for the lighting in parking, and especially for always indispensable startings or serving of driving energy.

Without supposing possibilities of the system, it is certainly possible to couple each vehicle wheel with one of the secondary magnets, since as it is said higher, each one of these magnets product an additional energy, in so far as he remains synchronized with the whole of the other magnets, from where the preference to use gears especially nonferrous, with teeth very to spaced apart which bring back necessarily the synchronism of the polar rotations following the braking of the vehicle.

The first searches on the subject, which go back to 1935, were intended to provide light to the inhabitants of the desert, using magnetic apparatuses producing of the electricity,

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Clarification on Source of Hatem Magnetic Cogging Device Plans

Yannick Van Doorne brings to our attention his role in launching the plans that we featured last week. He said that some replicators even claim to be running their homes on these devices. Yannick thinks he has devised a way to enable the motor to be removed from the system in self-running mode. (PESWiki; Oct. 14, 2010)

YouTube Videos

http://www.youtube.com/watch?v=TMxkkz2VTGA
How to Build Your Own Free Energy Device ...
10 min - Sep 25, 2010

http://www.dailymotion.com/video/x3yool_fimgenehatem_tech
Fim-gene-hatem
1 min - Jan 5, 2008

http://www.youtube.com/watch?v=OPHZJ6CP5ug
Building a small Hatem magnetic engine (attempt ...
5 min - Jun 7, 2010

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http://www.peswiki.com/

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http://teep.forumco.com/topic~TOPIC_ID~957.asp
microbe
Starting Member
6/10/2010

OS: Hatem Magnetic Cogging Device

From PESWiki
An open source project
Compiled by Sterling D. Allan
Pure Energy Systems News

Oct. 5, 2010

This system was developed and patented in France by Raoul Hatem in 2006.

On May 6, 2010, YouTube user, "MindFreer" posted a video that appeared to show one motor powering an alternator, producing twice as much energy as was required to run it, via a magnetic cogging coupling, which apparently harnesses free energy from the environment somehow. It involves magnetic drive coupling, which is not unique to this system. The particular arrangement of magnets seems to be the key.

Then, on Sept. 25, "MindFreer" posted another video, this one providing instructions on how to build this free energy device. The video says: "I am giving away the plans for the Hatem Free Energy device to the world for free." [2] (September 25, 2010)

It also says that they have not been able to self-loop the device yet, but that it can act to magnify energy from another source, whether it be solar, wind, or power from the grid.

The magnets mesh magnetically, not physically, as the drive motor turns. Allegedly, adding additional alternator cogs in series increases the output in relation to the input. [3] The magnets are placed so that the poles on adjacent rotors are opposed and thereby are always attracting the magnets they magnetically mesh with.

On Oct. 4, 2010, an associate said that it is likely that this is not actually an overunity system, and that it is a function of measurement errors. "Watt meters are not accurate outside of their 60 Hz specs; and they say nothing about reactive power or phase difference." A more accurate measurement would need to be conducted to convincingly show that this system is somehow harnessing energy from the environment to thereby produce more energy than it takes to run it.

Below, we have posted as much information as we have found pertaining to the replication of this effect. We offer this page as the home for this open source project. Feel free to log in and edit to keep things current, accurate, and clear.

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http://www.overunity.com/index.php?PHPSESSID=f5628aa20e51fd89d4839ae61d73bdd9&topic=7602.msg185409#msg185409

Asymatrix
Jr. Member
Re: yannicksonic's youtube magnetic gears overunity.
June 10, 2009

The guy [Yannick v. Doorne] is a relentless con man. He's the one with the key ring 'proof of concept' nonsense. The batcap obviously bumps up the output on a short term basis. It's funny how he took the magnets from the other scam video and used them as a linkage, as if it somehow facilitates overunity. Watch out for this guy, he's selling plans on a scam website and will likely keep trying.

AquariuZ
Hero Member
Re: yannicksonic's youtube magnetic gears overunity.
June 10, 2009

Yannick is supposed to be (Belgian) French.

The man speaking on this video is definitly not French. Not even Canadian French.

I agree that yannicksonic is a con man because he is selling plans via PayPal and he is using videos from various sources to attract the unsuspicious YouTube visitor to his site which he mentions in the description of those videos.

Yannick has not made this particular video, he is only using it to attract visitors to his site where he sells bogus plans.

Can we now actually discuss this video?

First off, any setup with battery banks or caps is suspicious and should be shown to run without draining.

If we need more info I would suggest tracking the maker of this video down.

tagor
Sr. Member
Re: yannicksonic's youtube magnetic gears overunity.
June 11, 2009

I speak of this man Hatem a few years ago see here

http://www.overunity.com/index.php?topic=1225.msg38067#msg38067

this scam does not work !!

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http://www.econologie.com/forums/prototype-machine-de-hatem-photos-et-explications-vt4375.html
1 Déc 2007

Prototype Hatem Motor

I experienced following the principle of Mr Hatem. I made two rotors ø27 cm

Rotors are each composed of 30 magnets spaced 2.83 cm.
A vacuum that runs very well without resistance, finding it as a magnetic gear.

To realize the so-called gravitational effect, I install a coreless coil to the output of the 2 rotors ordered with a Hall sensor itself by controlling the rotor magnets (This arrangement consumes only 9 watts) .

If the gravitation existed!! The rotors would rise quickly, but the opposite is happening speed stationed at 600 rpm = 10tr / s equivalent to the passage of 300 magnets / s.
It is obvious that if each magnet took less force output q'en entered the result would be an increase in speed that do not have that happening, so I have that the air resistance and bearings.

Then the gravitational unlikely!!

Another thing if I run my rotors at 2000 rpm with a drill in contact on a rotor, when I remove the power source, the rotor stops in a few minutes, so if there was no gravitation rotors should not stop seeing increasing their speed.

On the assembly of Mr Hatem I do not see the difference in torque that can have on one or more secondary rotors, it is clear that if we have more torque on the first rotor and the rotors after we could take power on the motor shaft without risk of dropping out of secondary disk. Example: If the secondary rotors gives only a couple additional 20% automatically on this strength and the motor shaft

I know very well the couple needed to provide power for. I am a water turbine which provided 2 kW / h when there is water. I'm running an old dynamo 110 Volt j ' 2 radiators have to modify them to work at 110 volts without a thermostat, I heat my house when it is not too cold for my real power is 48 kw / day. I made many experiments on free energy I think we will soon have free energy.

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http://www.conspirovniscience.com/forum/index.php?showtopic=270&st=360#

Hatem Motor Replication Tests

Set up this weekend of new weights on the 3 machines to increase the kinetic force recommended in the patent of Mr. Hatem.

http://www.econologie.info/share/partager/3plateaux.jpg
http://www.econologie.info/share/partager/alignement.jpg

Measures:

Engine No. 1 with a voltage of 60 volts DC (speed 3750 rpm)
leading to the generators 2 & 3. Gap 2.5 Mm the generators 2 and 3 are not supported.

Consumption: 3.323 Amp / h X 60 Volts = Watts 199.38
Output = 0

The ammeter left corespond has consolidated the drive motor. Right, ammeter load.

http://www.econologie.info/share/partager/mesures-0001.jpg

Engine No. 1 with a voltage of 60 volts DC (speed 3750 rpm)
leading to the generators 2 & 3. Gap 2.5 Mm the generators 2 and 3 are supported.

Consumption: 5.48 Amp / h X 60 volts = 328.8 watts
Production: 1.85 Amp / h X 60 volts = 111 watts

Balance: 328 - 111 = 217 watts of lost output for the least poor ....., ..., I see miserable shame ....

http://www.econologie.info/share/partager/mesures-0008.jpg

Next test. remove two rows of magnets to further increase the relative attraction force> force kinetics.

Much effort has provide insufficient magnetic torque, even by running the three machines in motor mode and then shutting off the supply of engines 2 & 3, the magnetic torque is to cause insufficient 2 and 3 without charge.

The test is pathetic .....

http://www.econologie.info/share/partager/...lottes-0001.jpg
http://www.econologie.info/share/partager/...lottes-0002.jpg

Well, if someone has another idea, I'm prenneur .....

I do not give up, the next test I'll increase the diameter of the No. 1 engine to speed on the aumenter 2.

Thank you for your comments ....

Ps, a video test here

http://www.dailymotion.com/videos/relevanc...arch/naca4412/1

Cordially

Naca

Thane HEINS

Infinity Generator

["Perepitea"]

http://www.thestar.com --- *The Toronto Star* (Tuesday, February 05, 2008)

Turning Physics on its Ear

by
Tyler Hamilton

Inventor Thane Heins with his electric motor invention, which he has dubbed the Perepiteia, in lab in the basement of his home in Almonte, near Ottawa.

`Holy crap, this is really scary,' inventor says of strange phenomenon.

It all began back in 1985, when Thane Heins, having studied electronics at Heritage College in Gatineau, Quebec, started thinking about how magnets could be used to improve power generators.

Has college dropout done the impossible and created a perpetual motion machine? Thane Heins is nervous and hopeful. It's Jan. 24, a Thursday afternoon, and in four days the Ottawa-area native will travel to Boston where he'll demonstrate an invention that appears "though he doesn't dare say it" to operate as a perpetual motion machine.

The audience, esteemed Massachusetts Institute of Technology professor Markus Zahn, could either deflate Heins' heretical claims or add momentum to a 20-year obsession that has broken up his marriage and lost him custody of his two young daughters.

Zahn is a leading expert on electromagnetic and electronic systems. In a rare move for any reputable academic, he has agreed to give Heins' creation an open-minded look rather than greet it with outright dismissal.

It's a pivotal moment. The invention, at its very least, could moderately improve the efficiency of induction motors, used in everything from electric cars to ceiling fans. At best it means a way of tapping the mysterious powers of electromagnetic fields to produce more work out of less effort, seemingly creating electricity from nothing.

Such an unbelievable invention would challenge the laws of physics, a no-no in the rigid world of serious science. Imagine a battery system in an all-electric car that can be recharged almost exclusively by braking and accelerating, or what Heins calls "regenerative acceleration."

No charging from the grid. No assistance from gasoline. No cost of fuelling up. No way, say the skeptics.

"It sounds too good to be true," concedes Heins, who formed a company in 2005 called Potential Difference Inc. to develop and market his invention. "We get dismissed pretty quickly sometimes."

It's for this reason the 46-year-old inventor has learned to walk on thin ice when dealing with academics and engineers, who he must win over to be taken seriously. Credibility, after all, can't be invented. It must be earned. "I have to be humble. If you say the wrong thing at the wrong time, you can lose support."

The creation in question is a new kind of generator called the Perepiteia (read related story "Holy crap, this is really scary"), which in Greek theatre means an action that has the opposite effect of what its doer intended. Heins torques up the definition to mean "a sudden reversal of fortune that's a windfall for humanity."

Deep down, Heins has high hopes. But he also realizes that merely using those controversial words "perpetual motion" usually brands a person as batty. In 2006, an Irish company called Steorn placed an advertisement in *The Economist* calling on all the world's scientists to validate its magnet-based "free energy" technology.

Steorn was met with intense skepticism and accused of being a scam or hoax. Seventeen months later the company has failed, despite worldwide attention, to prove anything under scrutiny. Well-educated people, from Leonardo da Vinci to Harvard-trained engineer Bruce De Palma (older brother of film director Brian De Palma), have made similar claims of perpetual motion only to be slammed down by the mainstream scientific community.

Heins has an even greater uphill battle. He isn't an engineer. He doesn't have a graduate degrees in physics. He never even finished his electronics program at Heritage College in Gatineau, Quebec. "I have mild dyslexia and don't do well in math, so I didn't do very well in school," he says.

What he does have is a chef's diploma, and spent time as chef at the Canadian Museum of Civilization before launching his own restaurant in Renfrew called the Old Town Hall Tea Room. He has also had political ambitions. In 1999 he ran unsuccessfully as a candidate for the Green Party of Ontario, deciding a year later to run as an independent in the federal election.

Today, Heins is focused on showing his invention to anybody willing to see it, in hopes that somebody smarter than him will give it credibility. His long-time friend, Kim Cunningham, manager of communications and government relations at the Ottawa Centre for Research and Innovation (OCRI) is working part-time with Potential Difference to help get the message out.

Together, they have demonstrated the Perepiteia to a number of labs and universities across North America, including the University of Virginia, Michigan State University, the University of Toronto and Queens University.

"It's generally always the same reaction," says Heins. "There's a bit of a scramble on the part of the observer to put what they're seeing into some sort of context with what they know. They can't explain it. They don't know what it is."

He'd be happy if somebody did, even if the news was bad. His wife has kicked him out. He doesn't earn an income. He can't pay child support. The certainty would be welcome. "I've tried to quit many times, and thought if I could just be a normal guy I would have a normal life ... But I had this idea and I believe it works."

Others want to believe --- or at least help out. Cunningham, whose brother is general manager at Angus Glen Golf Club, introduced Heins to the club's president, Kevin Thistle. For two years Thistle has acted as angel investor, providing start-up capital needed to incorporate Potential Difference, file patents and continue research.

Cunningham's boss, OCRI president Jeffrey Dale, helped open doors at the University of Ottawa and make introductions to its dean of engineering. As a result, Heins teamed up last fall with Riadh Habash, a professor at the university's school of information technology and engineering.

"Dr. Habash has essentially rolled out the red carpet," says Heins, explaining that he now has access to a university lab and all the equipment he needs to test and simulate his generator.

In an interview with *the Toronto Star*, Habash was cautious but matter-of-fact with what he's seen so far. "It accelerates, but when it comes to an explanation, there is no backing theory for it. That's why we're consulting MIT. But at this time we can't support any claim."

In the meantime, Heins has been on a letter-writing campaign to raise money for his mission. He's written former U.S. vice-president Al Gore, Virgin Group founder and billionaire Richard

Branson and John Doerr at venture capital powerhouse Kleiner Perkins Caufield & Byers. He's also tried to contact entrepreneur Elon Musk, chairman of electric car upstart Tesla Motors, and the "ReCharge IT" project run by Google's philanthropic arm.

So far no bites, though there have been nibbles. Heins has had discussions with a well-known investor in Oregon, known to many as the "godfather of start-ups," who is apparently flirting with the idea of investing in Potential Difference. "We got the impression ... he's not necessarily interested in making a tonne of money, he just wants to see us succeed."

Just before the big day at MIT, *the Star* spoke with professor Markus Zahn about what he expected to observe.

"It's hard for me to give an opinion," said Zahn, who admitted he was excited to see the demonstration. "I don't believe it will violate the laws of physics. You're not going to get more energy out than you put in."

He said it's easy for people to set up their tests wrong and misinterpret what they see. "You've got to look closely."

It's now Jan. 28 --- D Day. Heins has modified his test so the effects observed are difficult to deny. He holds a permanent magnet a few centimetres away from the driveshaft of an electric motor, and the magnetic field it creates causes the motor to accelerate. It went well.

Contacted by phone a few hours after the test, Zahn is genuinely stumped --- and surprised. He said the magnet shouldn't cause acceleration. "It's an unusual phenomena I wouldn't have predicted in advance. But I saw it. It's real. Now I'm just trying to figure it out."

There's no talk of perpetual motion. No whisper of broken scientific laws or free energy. Zahn would never go there --- at least not yet. But he does see the potential for making electric motors more efficient, and this itself is no small feat.

"To my mind this is unexpected and new, and it's worth exploring all the possible advantages once you're convinced it's a real effect," he added. "There are an infinite number of induction machines in people's homes and everywhere around the world. If you could make them more efficient, cumulatively, it could make a big difference."

Driving home --- 'he can't afford to fly' --- Heins is exhausted but encouraged. He says Zahn will, and must, evaluate what he saw on his own terms and time. What's preventing the engineer from grasping it right away, he says, is his education, his scientific training.

Step by step, Heins is making progress, but where it will all lead remains uncertain.

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http://v3.espacenet.com/publicationDetails/biblio?adjacent=true&KC=A1&date=20090118&NR=2594905A1&DB=EPODOC&locale=en_EP&CC=CA&FT=D
http://patents.ic.gc.ca/cipo/cpd/en/introduction.html

CA2594905
BI-TOROID TRANSFORMER

HEINS THANE CHRISTOPHER
2009-01-18
Abstract -- The invention provides a means of increasing transformer efficiency above 100%. The transformer consists of a single primary coil and two secondary coils. The t wo secondary coils are set on a secondary core toroid which is designed to be maintained at a lower reluctance than the primary core toroid throughout the transformer's entire operating range. When the transformer secondary delivers current to a load the subsequent induced back EMF is not allowed to couple back to the primary due to the higher reluctance flux path . Instead the secondary coil's induced back EMF follows the path of least reluctance into the adjacent secondary coil.

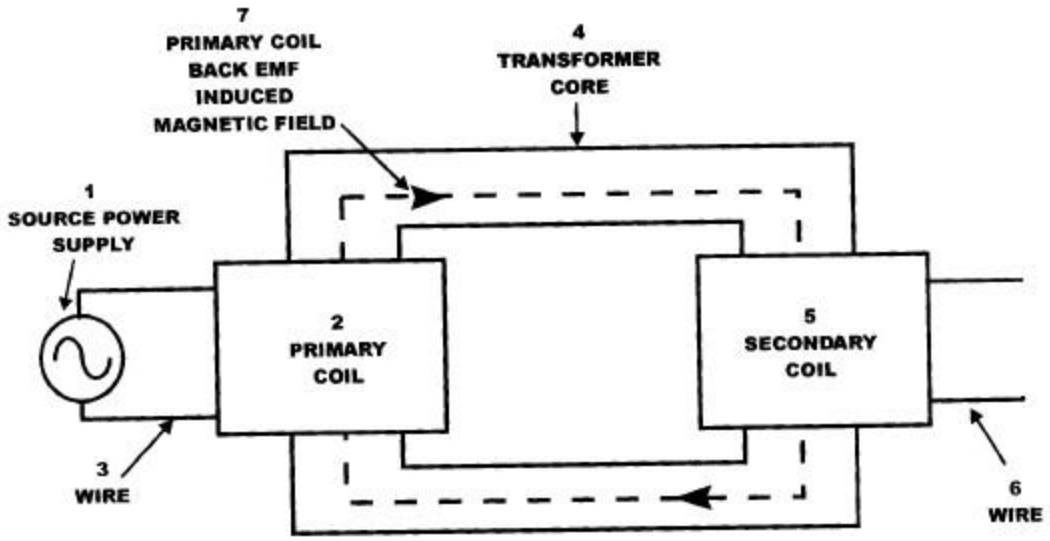
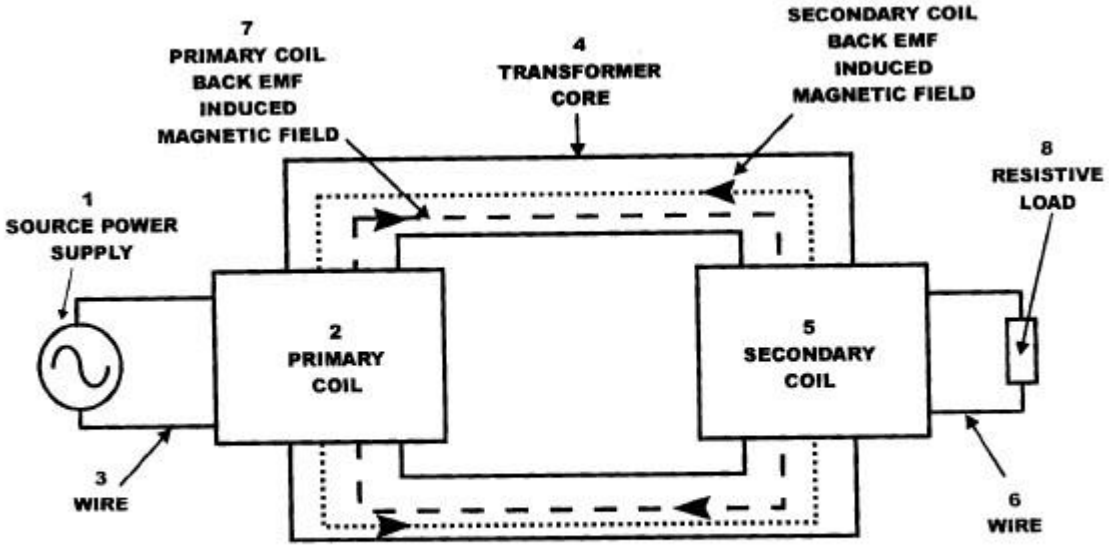


DIAGRAM 1



// DIAGRAM 2

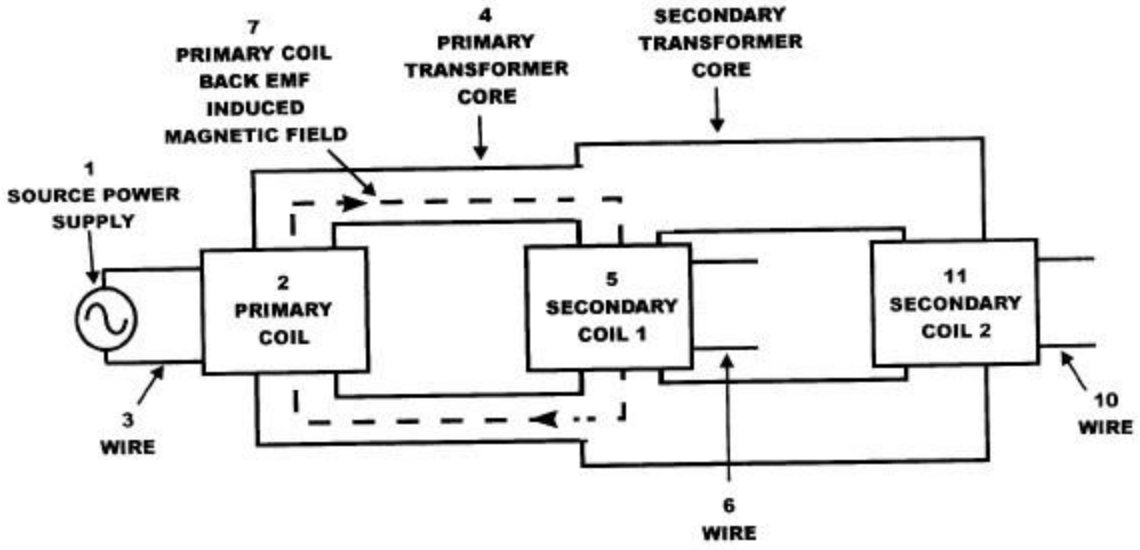
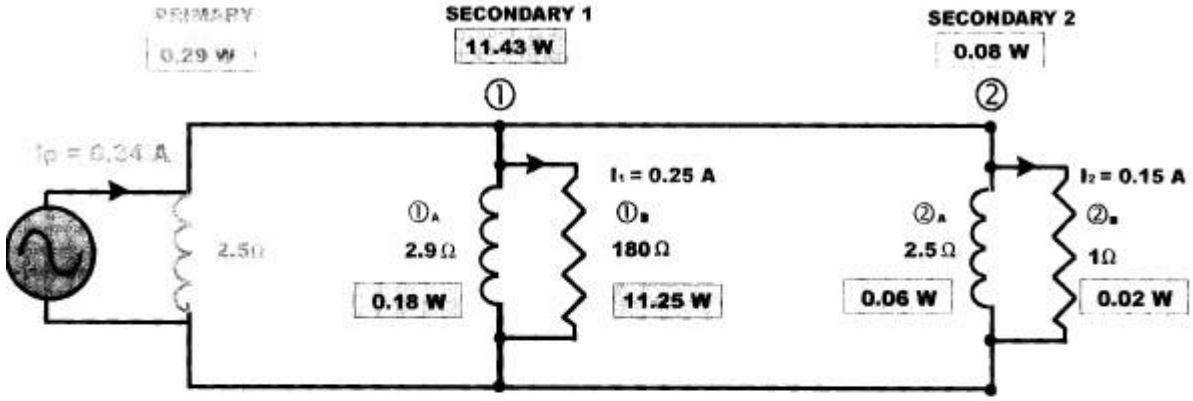


DIAGRAM 3



V = 49.8 V
I_P = 0.34
50 Hz
R = 2.5 Ω
Z = 146.5 Ω
S_P = 49.8 x 0.34
= 16.9 VA
$P_P = I^2R = 0.34^2 \times 2.5\ \Omega$
= 0.29 W
Power Factor, COS θ
= true power / apparent power
= 0.29/16.9
= 0.017 or 89.0°

TOTAL PRIMARY POWER = 0.29 W

S1- A
$P_{1A} = I^2R$
$= (0.25)^2 \times 2.9$
$= 0.18$ W

S1 - B
$P_{1B} = I^2R$
$= (0.25)^2 \times 180$
$= 11.25$ W

$PS1_T = P_{S\ 1A} + P_{S\ 1B}$
$= 0.18 + 11.25$
$= 11.43$ W

S2- A
$P_{2A} = I^2R$
$= (0.15)^2 \times 2.5$
$= 0.06$ W

S2- B
$P_{2B} = I^2R$
$= (0.15)^2 \times 1$
$= 0.02$ W

$PS2_T = P_{S\ 1A} + P_{S\ 1B}$
$= 0.06 + 0.02$
$= 0.08$ W

TOTAL SECONDARY POWER = PS1 + PS2
= 11.43 W + 0.08 W
= 11.51 W

//

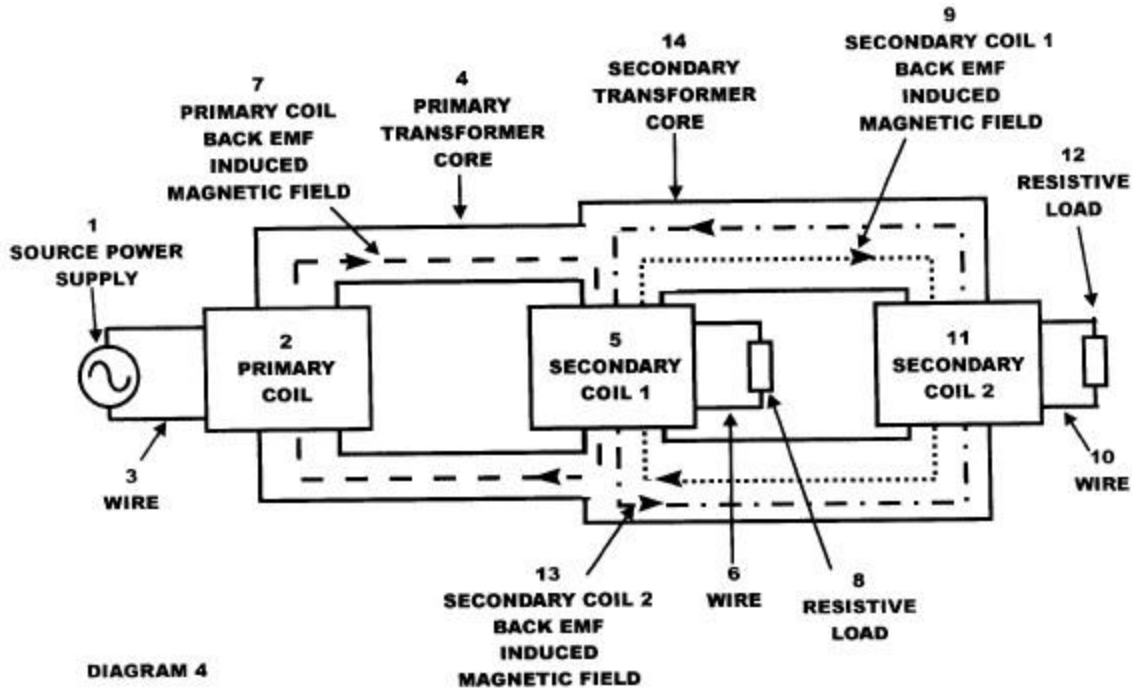

9
SECONDARY COIL 1
BACK EMF
INDUCED
MAGNETIC FIELD
14
SECONDARY
TRANSFORMER
CORE
7
PRIMARY COIL
BACK EMF
INDUCED
MAGNETIC FIELD
4
PRIMARY
TRANSFORMER
CORE
12
RESISTIVE
LOAD
1
SOURCE POWER
SUPPLY
2
PRIMARY
COIL
5
SECONDARY
COIL 1
11
SECONDARY
COIL 2
3
WIRE
10
WIRE
13
SECONDARY COIL 2
BACK EMF
INDUCED
MAGNETIC FIELD
6
WIRE
8
RESISTIVE
LOAD

DIAGRAM 4

BI-TOROID TRANSFORMER

This invention provides an improved transformer efficiency.

BACKGROUND OF THE INVENTION

Conventional high performance transformer efficiency range is between 91 to 99 %. The quality of materials used is one factor which dictates this efficiency percentage, another factor is the mutual coupling coefficient between the primary coil and the secondary coil.

In a conventional transformer, mutual coupling is employed to ensure that all (or virtually all) of the Back EMF induced magnetic flux from the primary reaches the secondary. When the secondary coil delivers current to a load - Back EMF is induced in the secondary and the magnitude of secondary Back EMF flux is directly proportional to the load applied.

Secondary Back EMF flux couples back (mutually) to the primary and when it does it lowers the impedance of the primary causing more current to flow in the primary coil - thus causing more primary Back EMF to be induced. The load component of primary current increases with secondary load and maintains the transformer core flux at nearly its initial value. This action enables the transformer primary to take power from the source in proportion to the load demand, and to maintain the terminal voltage approximately constant.

At no load on the secondary no current flows and no power is dissipated but voltages are present at both the primary and secondary terminals. Primary (current increase) and power increase can only occur, and is completely dependent upon secondary Back EMF flux coupling back to the primary.

No secondary load = No Secondary Back EMF = No increase in primary power.

SUMMARY OF THE INVENTION

As mentioned above, conventional transformers employ mutual coupling between the primary and the secondary coil. Conventional transformer design generally consists of one primary coil and one secondary coil.

The Bi- Transformer design also has one primary coil but it differs from conventional transformers in that it has two secondary coils. The two secondary coils are set on a Toroid shaped core with a reluctance which is maintained at a lower value than the primary core leg throughout the transformer's entire operating range. This can easily be accomplished by physically increasing the Toroid area or using transformer core material with a higher relative permeability.

For example; typical transformer iron has a relative permeability of about 200 or so. Permalloy, which is higher grade material has a relative permeability of around 100,000. If typical transformer grade iron is employed in the primary coil leg and permalloy in the second, then the Toroid (secondary coils) reluctance will be 500 times less than the primary.

Reluctance; is the metal's resistance to the flow of magnetic flux.

Relative Permeability; is a material's ability to contain and allow the flow of certain magnitudes of magnetic flux. without saturating.

Saturation; occurs when the material containing the flux becomes full and additional flux cannot be contained and it exits the material.

The higher the value of relative permeability of the material used - the less reluctance to the flow of magnetic flux it represents to the magnetic circuit.

It is important to note that the reluctance of a magnetic conductor rises with an increase in flux magnitude i.e. more flux = higher reluctance. Magnetic flux always follows the path of least reluctance.

Because the Secondary Coil(s) Back EMF cannot couple back to the Primary all of the current in the Primary Coil is Reactive current (also referred to as 'magnetizing current') and it is returned to the source. Net Power = 0

There is no (or virtually no) Secondary Back EMF magnetically coupling back to the Primary reducing the Primary's impedance and causing it to draw non reactive current from the source in response to secondary loads.

In simple terms the PRIMARY Power = 0 W (reactive current only - power factor = 0) and the SECONDARY Power = W because all the Secondary induced Back EMF is trapped within the Secondary Toroid and cannot couple back to the Primary. Ideally there should be virtually NO REAL POWER dissipated in the Primary Coil except for that which is lost due to the Primary's DC coil resistance.

DETAILED DESCRIPTION OF THE INVENTION

Diagram 1 shows a conventional transformer design with a primary coil 2 and a secondary coil 5 which are both set on a ferromagnetic core material 4 and physically and magnetically coupled to one another. When the power supply 1 induces a voltage in the primary coil 2 according to Faraday's Law of Induction - a Back EMF induced magnetic field 7 is produced in the core material 4 at the same frequency of the alternating current supplied by the power source 1.

This alternating magnetic field 7 also induces a voltage in the secondary coil 5 according to Faraday's Law of Induction. It should be noted that because there is no load on the secondary coil 5 as shown in Diagram1 the primary coil 2 is dissipating a minimum amount of power because virtually all of the current flowing in the primary coil 2 is reactive current - stored in the inductor coil and then returned to the power source 1. The only real power dissipated by primary coil 2 is due to its DC resistance.

Diagram 2 shows that when a resistive load 8 is placed on secondary coil 5, a Back EMF induced magnetic field 9 is produced in secondary coil 5 and this magnetic field 9 couples back through the transformer core 4 and into the primary coil 2. The effect is the impedance of the primary coil 2 is reduced and tends to become more resistive and less inductive thus drawing real current as opposed to reactive current from the source power supply 1. The magnitude of real current taken from the source power supply 1 from the input primary coil 2 is directly proportional to the resistive load 8 placed on the secondary output coil 5

Diagram 3 shows the Bi-Toroid transformer with one primary coil 2 and two secondary coils - secondary coil 1 (5) and secondary coil 2 (11). The three coils (2, 5, 11) are set on a figure 8 shaped core made up of two Toroid cores 4 and 14 joined together in such a manner that magnetic flux can readily pass from one to the other. It should be noted again that the secondary Toroid core's 14 reluctance is always maintained at a lower value than the primary core 4 to ensure that all secondary coils' 5 & 11 Back EMF induced magnetic flux 9, & 13 cannot couple back to the primary coil 2.

At no load on secondary coil 5 in diagram 3 no current flows in secondary coil 5 and the power (magnetizing current) dissipated in the primary coil 2 is minimal and virtually all reactive current.

Diagram 4's operation is as follows in the 3 steps:

Step 1
Primary coil 2 induces a NO LOAD voltage into Secondary Coil 1 (5) according to Faraday's Law of Induction.

Step 2
Secondary Coil1 (5) has an induced voltage in it also given by Faraday's Law of Induction.

Secondary Coil1's (5) induced Back EMF 9 follows the path of least reluctance into Secondary Coil 2 (11). The Secondary Toroid CORE AREA 14 is twice that of the Primary Toroid 4 so the Secondary Toroid's 14 reluctance is half that of the Primary return flux path 4. Magnetic flux

always follows the path of least reluctance.

Step 3
Secondary Coil 2's 7 induced Back EMF 13 also follows the path of least reluctance into Secondary Coil 1 2 and also CANNOT COUPLE BACK TO THE PRIMARY because the reluctance flux path is higher.

Because the Secondary Coil(s) 5 & 11 Back EMF 9 & 13 cannot couple back to the Primary all of the current in the Primary Coil is **REACTIVE CURRENT** and it is returned to the source 1. Net Power = 0

There is no (or virtually no) Secondary Back EMF 9 & 13 magnetically coupling back to the Primary 2 reducing the Primary's impedance and causing it to draw **non reactive** current from the source 1 in response to secondary loads 8 & 12.

In simple terms the PRIMARY Power 2 = 0 W (reactive current only - power factor = 0)

and the SECONDARY Power 5 & 11 = W because all the Secondary induced Back EMF 9 & 13 is trapped within the Secondary Toroid 14 and cannot couple back to the Primary 1.

Our prototype is close to this but not quite (only > 3000% efficient) as can be seen from the data sheets where the primary current increases as the secondary load is reduced (1 ohms) and the efficiency drops from 3000% down to only 146% or so. Ideally there should be virtually NO REAL POWER dissipated in the Primary Coil except for that which is lost due to the Primary's DC coil resistance.

TRANSFORMER DATA from Magenn Power Inc.

Nykolai Bilaniuk, Ph.D., P.Eng.
Chief Engineer, Electrical Systems
Magenn Power Inc.

In our lab, I first measured the resistances of all the resistors. I took the liberty of marking the ones you hadn't already marked, and I measured them using a very accurate multi meter (our Hewlett Packard HP34401A). I wanted to confirm that their values are close to nominal. Their exact value would only have become important if the efficiencies appeared to be within a few percent of 100%. Here are the raw measurement results:

Short circuited probes on the HP34401A = 0.023 ohm (this value should be subtracted from the next six)
180ohm #1 = 178.72 ohms
180ohm #2 = 177.04 ohms
75ohm #1 = 75.078 ohms
75ohm #2 = 75.923 ohms
1ohm #1 = 1.013 ohm
1ohm #2 = 1.003 ohm

Is2 = 1.81 Arms
Pr1 = 8.88 W
Pr2 = 3.27 W

Sincerely,

Nykolai Bilaniuk, Ph.D., P.Eng.
Chief Engineer, Electrical Systems
Magenn Power Inc.

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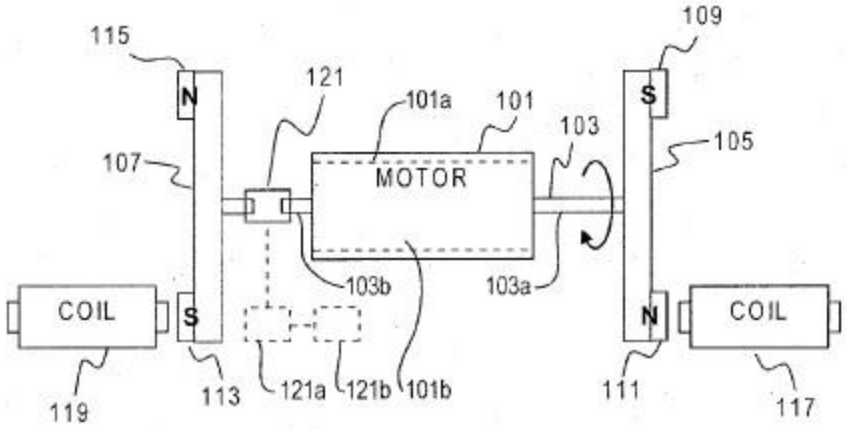
http://v3.espacenet.com/publicationDetails/biblio?adjacent=true&KC=A2&date=20080612&NR=2008067649A2&DB=EPODOC&locale=en_EP&CC=WO&FT=D

WO2008067649
IMPROVED POWER DEVICE

HEINS THANE CHRISTOPHER
2008-06-12

Abstract -- The invention provides a means of increasing transformer efficiency above 100%. The transformer consists of a single primary coil and two secondary coils. The t wo secondary coils are set on a secondary core toroid which is designed to be maintained at a lower reluctance than the primary core toroid throughout the transformer's entire operating range. When the transformer secondary delivers current to a load the subsequent induced back EMF is not allowed to couple back to the primary due to the higher reluctance flux path . Instead the secondary coil's induced back EMF follows the path of least reluctance into the adjacent secondary coil.

A generating device is disclosed comprising a motor, an axle of the motor projecting from at least one end of the motor, at least one rotor mounted on the axle, at least one magnetic pole mounted on the rotor and a coil mounted in operative proximity with said magnetic pole.


115
109
N
S
121
101a
101
103
105
107
MOTOR
103b
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COIL
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121a
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101b
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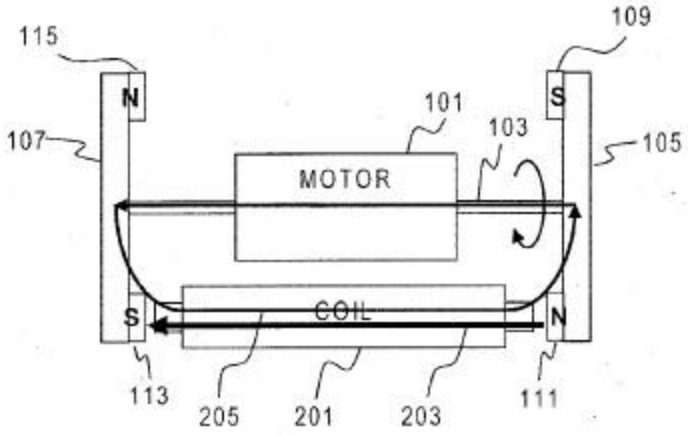
117

FIG. 1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MOTOR
COIL
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203
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FIG. 2

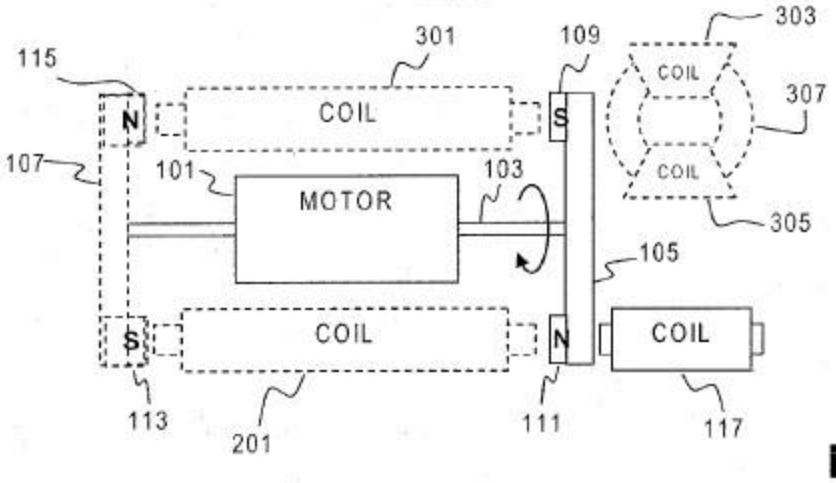


FIG. 3

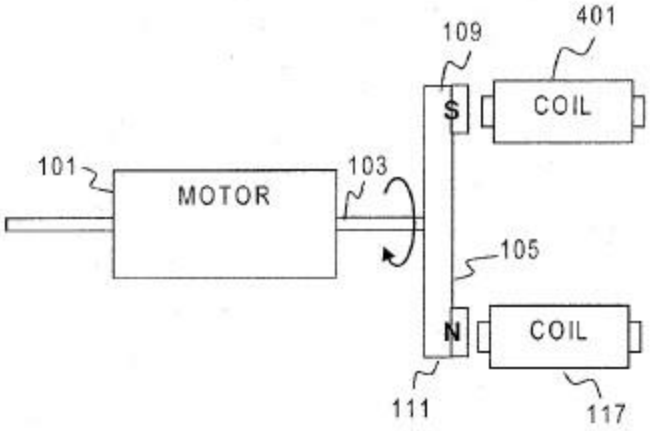


FIG. 4

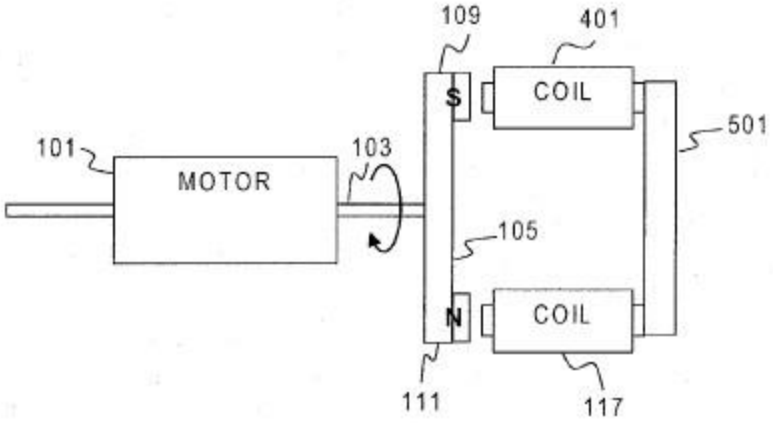
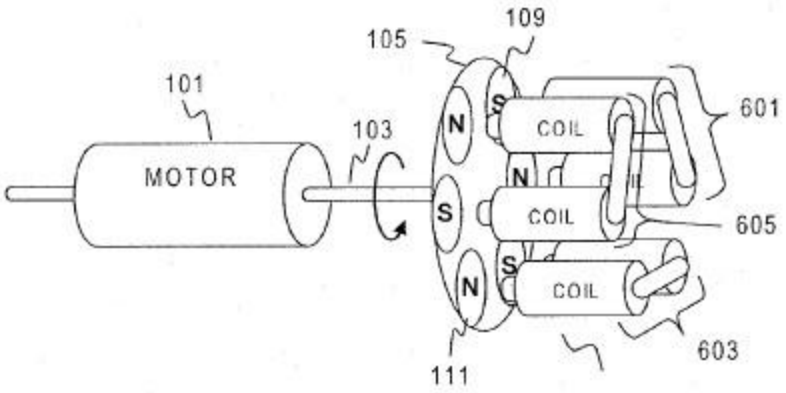


FIG. 5


105
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605
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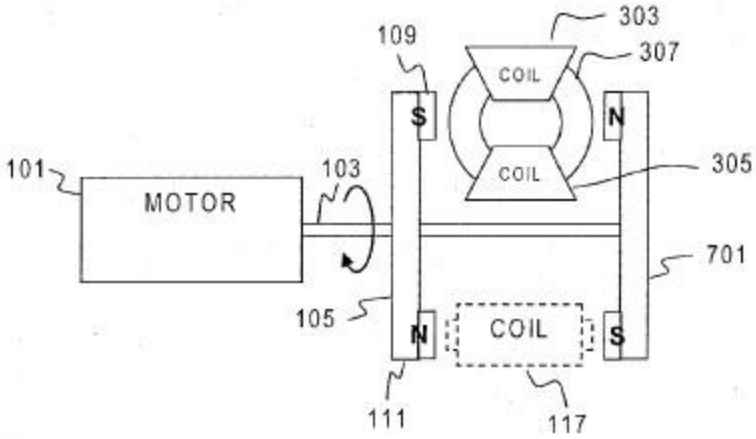
FIG. 6


303
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MOTOR
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COIL
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FIG. 7

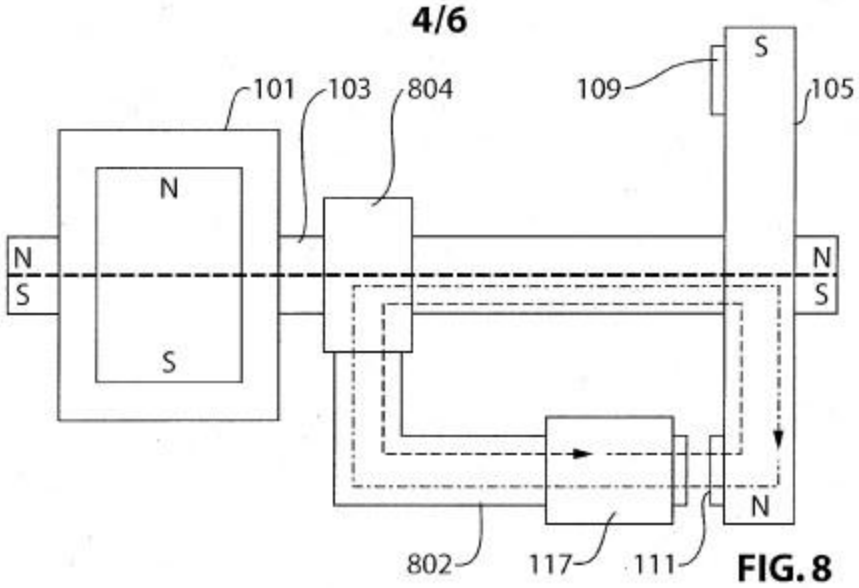
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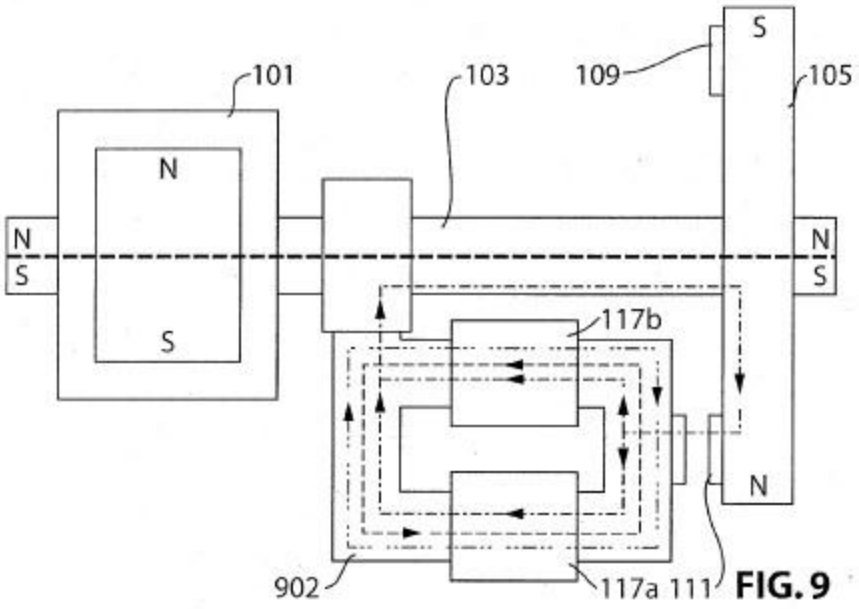
FIG. 8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S
N
S
117b
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902
117a
111

FIG. 9

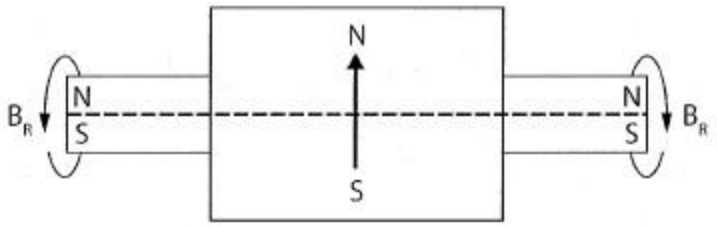

FIG. 10

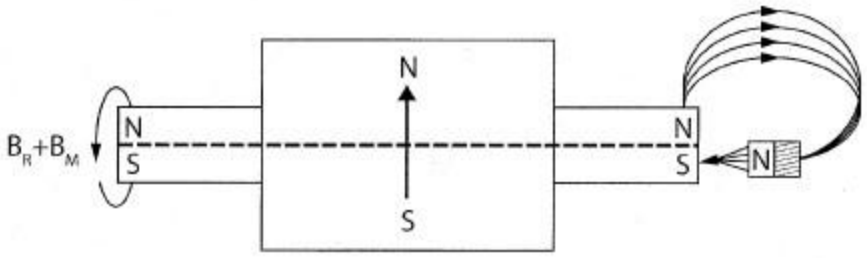

FIG. 11

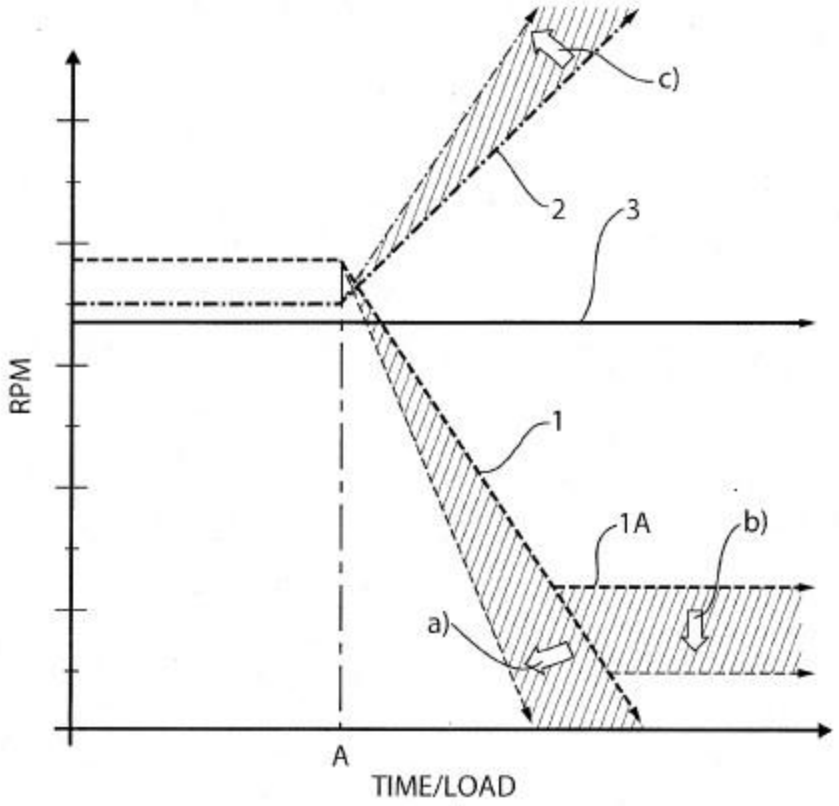

FIG. 12

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http://v3.espacenet.com/publicationDetails/biblio?adjacent=true&KC=A1&date=20050215&NR=2437745A1&DB=EPODOC&locale=en_EP&CC=CA&FT=D
http://patents.ic.gc.ca/cipo/cpd/en/introduction.html

Infinity Generator
Canadian Patent # 2,437,745
(15 Feb 2005)

Description of Operation

List of Components (Figure 1.0 [Not vailable])

4 Permanent magnets; M1, M2, M3, m4
4 Type II High Temperature Superconducting Wire and Coils C1, C2, C3, C4

As the inner coil C1 and C2, rotates around magnets M1 and M2, a current is induced in the wire/coil.

According to Lenz's Law an electromagnetic force is produced around the wire/coil which acts to stop the rotating action as shown in Figure 1.0 by Force 1 and Force 2 (The Conservation of Energy).

The inner coil C1 and C2, which is surrounded by magnets M1 and M2, dictates the magnitude and direction of current flow, which in turn is determines by faraday's ;aw;

When a magnet approaches an infinitely long wire or coil an electric voltage is induced in the wire.

The magnitude of induced voltage (Emf) if determined by:

1 --- The number of turns in the coil, N

2 --- The strength of the external magnetic field, B.

3 --- The area perpendicular to the magnetic field or the area of the coil, A.

4 --- The rate (speed) at which the magnet approaches the wire, Delta T.

The inner coil C1 and C2, has a greater number of turns N, a stronger magnetic field strength B and a greater area perpendicular to the magnetic field A than the outer 2 coils C3 and C4 which correspond to Magnets M3 and m4.

As the current I flows out through the outer 2 coils C3 and C4, an electromagnetic field is produced --- Force 3 and Force 4, which encourages the direction of rotation rather than opposing it as was seen by the inner coils and the forces F1 and F2. This can be explained by the Left hand Rule of Electricity for Motors and the right Hand Rule for Electricity respectfully, where the thumb points in the direction of force applied F, the index finger points in the direction of the magnetic field B, and the middle finger in the direction of the current flow I.

Because Type II High Temperature Superconducting Wire/Coils are employed there is no resistance in the wire and no loss of output due to the windings resistance in the exterior coils.

Image 2 details what magnitudes and directions of torques are produced within the generator.

The calculations show that by changing either the magnetic field strength B, or the length of the outer coil L, o the length of the lever are 3 or 4, the complimentary toque produced at the outer coil can be greatly affected and utilized to negate not only the negative emf's but resistance in the bearings and the wire if a conventional generator design is utilized, i.e., copper or silver wire.

Risks and Uncertainties

There is an assumption being made in this design proposal which suggests that current will flow from the inner coil out through the outer coils and that the outer coils will not generate their own current. If there is an initial current being generated in the outer coils it will be overcome by the current generated by the inner coil because the inner coil will be designed to produce a current of greater magnitude and duration.

Care must be taken to ensure that coils C3 and C4 and the rate (speed) at which the wire/coil approaches magnets M3 and m4 Delta T, does not have a negative effect on the generator's performance.

Current sensitive switching may be employed if needed to ensure the desired direction of current flow.

From PESWikiDiscussion page for Directory: Perepiteia Generator by Potential Difference Inc ---

Perepiteia Generator Harnesses Back EMF - Thane Heins of Potential Difference Inc stumbled upon a way of making electric induction motors work, at the very least, more efficiently. At most, he may have found a way to manipulate magnetic fields so that instead of slowing down a generator it speeds it up. (*PESWiki*; Feb. 6, 2008)Comments No Useful Output*On Feb. 6, 2008, Peter Lindemann, DSc,* writes:

I have reviewed all seven video links. In all fairness, I would like to say that Thane has built some nice demonstrations and spent a lot of time running experiments. That said, the films show nothing important. First of all, the films do not show enough detailed information to evaluate the demonstrations. Second, no free energy is shown. In fact, the generators are never shown producing any useful outputs. They are either shown producing voltage in "open circuit" mode, or they are shown in "short circuit" mode, where the generated voltage drops below one volt. So, ZERO WATTS are produced in either case.

The changes in mechanical drag are due to changes in inductance and hysteresis. Back in the 1980's, both John Bedini and I independently worked with "variable reluctance" generators. We both saw that these designs work like an inverse to a standard induction generator. That is, they produce maximum drag in "open circuit" mode, and minimum drag in "short circuit" mode. John found that the point of maximum benefit in this situation is to charge a battery, where the impedance of the generator "sees" the battery as a "near short circuit". Under these circumstances, the generator free-wheels and the battery charges quickly.

Unfortunately, Thane is not showing any useful benefits from the generator output. So, there is no "efficiency" to calculate because there is no output!

The real problem with these demonstrations has to do with his motor drive. The motor driving his system is a single phase induction motor. This type of motor has almost zero starting torque, and only produces its rated power at rated speed. So, the rated speed of his motor is probably in the neighborhood of 1725 RPM. Running this motor in the 100 RPM range converts 98% of the input electric power to HEAT. He says he has a capacitor in the input circuit to the motor, but this is never shown in schematic, so we don't know how it is hooked up. If the capacitor is connected in SERIES with the motor winding, it will act as a current limiter, and skew the power factor of the motor towards reactive power. This is fine, IF you want to limit the mechanical power of the motor as well. If the capacitor is connected in PARALLEL with the motor winding, it will act to produce reactive power for the motor locally, and reduce the amount of power it draws from the wall. But again, this would only be significant at rated speed.

The effect he shows when a magnetic field is applied to the motor shaft would be undetectable if he was operating the motor correctly. It is a very weak effect. It is probably caused by the external magnetic field interfering with the induced magnetic field of the rotor. This would not happen if the motor coils were not being severely current limited and the rotor was not "slipping" severely in the rotating magnetic field of the stator.

My GUESS is that the capacitor is in SERIES with the motor winding. This will limit the current to the motor to a specific maximum. At the speeds he is running these motors, the only other mechanism to hold back the input current would be the resistance of the wire in the motor coils. If that is all he had, the motor would quickly over-heat and melt the insulation right off the wire. The fact that the motor is running hot is proved in the seventh film where a large black fan is shown blowing on the motor!

From the data presented, my best estimate of the efficiency of the demonstrations is that over 90% of the energy going into the motor is converted to heat. The changes in drag of the generators is standard behavior for variable reluctance topologies, so accelerations or decelerations of the motor DO NOT represent energy production, just changes in HYSTERESIS DRAG. Since no output energies are ever measured, the input to output efficiency ratio is ZERO.

Thane Heins may have more important discoveries in his lab, but they are not demonstrated in these videos.

I'm really sorry to have to comment negatively on Thane's work. He is exploring a new effect, and he is pretty brave to put out his data. It took John and I years to figure out what these kinds of generators were really doing and why. It is not obvious, and it takes a lot of experimenting and thinking to work it out.

Thane really needs to show the complete schematic of his test apparatus, including the strength and orientation of the magnets on his generator wheel, as well as the specifications on his drive motor. There is a lot of important data missing from the demos.

Nothing more than a hysteresis brake

On Feb. 6, 2008, DMBoss wrote (http://www.overunity.com/index.php/topic,4047.msg75615.html#msg75615): Quote from: blindsangamon on Today at 02:45:23 AM It appears that the Perepiteia Motor is nothing more than a hysteresis brake. Placing the steel rods (wound by coils) near the spinning magnets induces alternating magnetic flux within the rods, the resulting magnetic hysteresis causes drag on the rotating disk, and heat losses within the steel rods. Shorting out the coils effectively shields the steel rods from the disk's magnetic field, eliminating the hysteresis drag. This causes the motor to speed up - but not as much as it would if the steel rods were removed completely. BUSTED! Hi:

blindsangamon is correct. This is a common phenomenon regards "generators", but one often not commonly known about if you are not working with AC motors and generators all the time. So the professor at MIT may not have this practical engineering savvy to identify the issues at first glance.

An hysteresis brake is one way to describe the apparently anomalous increase in speed when you short the generator coils. What EVERY ferromagnetic core does when exposed to varying magnetic fields is to have it's domains rock or flip direction in accord with the magnetic field changes impinging on them.

This consumes power in the "friction" between domains as they sort of scrape past each other. It results in the material heating up. In addition to this hystersis "loss" is an eddy current effect within bulk steel from the very same time varying magnetic fields, also making heating of the core. These two effects combined are commonly termed "core loss".

Core loss produces a reaction torque in a generator, in that the domain "friction" resists their aligning with the external field - causing more drag torque. Eddy currents make magnetic fields which oppose the fields making the eddy currents too, making more drag torque.

Now "core loss" in any ferromagnetic core material is directly proportional to the induction, B. Put another way the higher the delta flux density, the more core loss you get. (it is also proportional to the frequency, but let's assume a constant freq here, even though it is not at a constant one - it speeds up and slows down, again a neophyte mistake - you must measure things here at common speeds/freqs to make comparisons accurately)

And the induction, B is then what produces the coil voltage via Faraday/Lenz laws. That is voltage is the time derivative of delta flux. So people, when you short a generator coil and it's voltage drops to near zero, you can be certain that the delta B within the coil's core is also near zero!

So if you started with a delta B of say 1,000 gauss at no load on the coils, and your core material produces say 15 watts of core loss per pound of core (solid steel is in this ballpark, which is why we laminate special steels for transformers which takes the core loss down to about 2 watts per pound) then you'd have some serious drag torque experienced by the drive motor with coils open circuit.

Now if you short the coils and drop the delta B down to say 10 gauss, you have REDUCED the core loss by a factor of 1000/10=100 times less core loss when shorted than when open circuited!

This means 100 times less drag torque felt by the drive motor! (therefore the common shaft speeds up when coils are shorted, duhhhh)

This is amateur hour gone mad - both in the videos and mostly in these lists! Which does nothing but hurt the cause of getting O/U to the masses in my view, as it simply reinforces to the powers that be in the scientific community that it is a bunch of flakes and idiots making these claims!

Now I will also say, that heavily loading certain geometry of generator, can produce some gain. I have several examples on the bench which do. But they are proprietary and I don't care to share this with lists. BUT you have to do proper energy/power balances to measure this gain. And you have to endeavor to reduce core losses to a minimum and account for core loss change when you heavily load the coils too.

I have one which gets a gain in excess of the entire core loss value, both eddy and hysteresis - therefore the gain cannot be from this artifact that plagues all coil/core systems. But it is a modest gain, and yes the rotor does want to speed up. But you have to manage this speed, and measure the loaded and unloaded condition at the same shaft speed, because friction and windage change too when speed changes.

Then you have to measure True power at the shaft input via torque sensing and speed, against True output power, including friction, core loss, coil heating and direct electrical output for a complete energy/power balance. In fact there is an IEEE protocol for doing a complete power balance on motors and generators, which includes all these things.

This person did few if none of these things properly and is delusional about the apparent speed increasing meaning it is O/U. There could be a small amount of gain in his sloppy and amateurish system, but it is completely overriden by mundane, conventional effects as "blindsangamon" correctly points out.

Sorry for being so terse with you folks, but it is very annoying to watch so many people do harm to the cause by spouting off without really having a grasp of conventional ElectroMagnetics. Both amateur's like in these videos, and indeed a large percentage of the armchair critics populating these lists! Do your homework before putting foot in mouth!

There's a few rational voices out there, blindsangamon being one, and most of you then deride these voices with nonsense and blind faith!

here's a simplified protocol for measuring a generator's complete power balance:

Pick or know the optimal final speed of the system. Use only this shaft speed for all measurements.
1 Measure all parameters in a generator "no load" condition including: 2 Friction alone, meaning

with no magnets or mag fields acting on the cores. 3 Then include the mag fields and measure the input drag power (torque times angular velocity).

The difference between 3 minus 2 is the core loss at no load.

4 Measure the DC resistance of all coils as they would be connected in a loaded condition (i.e. series or parallel).
5 Load the generator at the same speed as the no load tests.
6 measure input power via torque times speed. (Newton-meters times RPM times 0.1047 = shaft power in watts)
7 measure True output electrical power. Not with DMM's. but with appropriate True Power meters or analyzers.
8 measure coil current, and calculate coil's "Joule heating" via I^2R.
9 measure and compare coil voltage compared to no load voltage for a ratio with which to discount core loss.
Then take the loaded input shaft power in watts as INPUT to system.

Against this Input, you add the following:
a electrical output in watts
b friction in watts
c core loss via no load core loss times the voltage drop ratio (so if no load core loss were 37 watts, and no load voltage was 125V and loaded voltage is 83V, then the ratio is 0.664. Multiply 0.664 times no load core loss of 37 watts to equal 24.57 watts output core loss)
d coil heating via I^2R

Add up item a through d for the total system OUTPUT.

Now divide Output by Input for your COP. (Coefficient of Performance)

Note friction, core loss and coil heat are legitimate outputs.... they heat the room! Useful output is an arbitrary distinction based on subjective criteria. If you want shaft power then heat is not useful. If however you want a heater, then shaft power is not useful! So to know in the absolute sense if a thing is over unity or not, you have to account for ALL outputs in a balance sheet.

That's another pet peeve of mine - those who dismiss everything they deem as "not useful"! Now suppose you had a system which routinely produces 200% more heat output in coil heating and core heating while it turns a shaft as in some newfangled motor. The shaft power COP is only 35%, but overall the system is 200% gainful. These persons I refer to would dismiss this as not being useful because the shaft power is under unity!

When in fact a home heating system would require a heat exchange mechanism to get heat from your machine to the air, thus it requires a pump - moving air or water or both. So you could make "use" of both the excess heating and the shaft power from said system!

My point is at these early stages it is imperative that you measure all aspects even if you may "think" they aren't useful. For complete energy balances and because overunity may not come in the form you wish it to!

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http://www.canada.com/ottawacitizen/news/story.html?id=31887883-be00-4d3c-8763-d96564794cae

The Ottawa Citizen (March 01, 2008)

An Internet commotion over 'perpetual motion' -- Almonte inventor hits a nerve with claims.

by Tim Shufelt

In the back of a University of Ottawa engineering lab, inventor Thane Heins will soon be adding light bulbs to his electrical generator, a modest improvement considering he says his device already transcends the basic laws of physics.

The suggestion was made to improve the frequent demonstrations Mr. Heins gives after he and his contraption became Internet sensations attracting worldwide attention.

The 46-year-old from Almonte says the lights will serve as visual cues of the electrical load he already applies to his system, which should, in theory, slow everything down.

Thane Heins says he'll be more careful about how he describes his invention after a storm of controversy erupted on the Internet. (Photo by Bruno Schlumberger, The Ottawa Citizen)

Instead his electric motor accelerates when the load is applied, in an apparent contradiction of the law of conservation of energy.

Videos of the demonstration have been viewed more than 280,000 times on YouTube in the last four weeks. His story was also featured on Gizmodo, Slashdot, BoingBoing and Wired.com.

That's the buzz you generate when you claim to have stumbled upon the "genesis of perpetual motion."

It's also an example of how the Internet can vault an unknown person to a global audience, said Michael Geist, a University of Ottawa professor and a specialist in Internet law.

"Some of the most popular online media sites and blogging sites have audiences that in some instances exceed mainstream media," Mr. Geist said.

Mr. Heins said there have been too many phone calls to return from investors the world over who have offered up millions in seed money. Even NASA has expressed interest in what Mr. Heins calls Perepiteia, a variation of a word used in Greek theatre to describe an action that has the opposite effect of what was intended.

But the response on high-tech websites, blogs and chat rooms has been far from charitable.

"This guy seems to be a crook who tries to do his job by letting the victims read between the lines," one user wrote on Slashdot.

"Oh no, not another one of these crackpot ideas" another wrote in a high-tech chat room.

Even those who are willing to give him the benefit of the doubt, can't seem to resist taking shots either. "Of course, if it proves genuine, we WILL have to burn him," someone wrote on BoingBoing.

So now Mr. Heins is not just modifying his prototype to make it more understandable, he's also trying to choose his words more carefully to avoid offending mainstream science with tainted concepts like perpetual motion.

"Those dirty words," he said. "We do not use those words, no matter what. Because as soon as you do, you're dead."

That kind of talk has strained his relationship with Markus Khan, an MIT electromagnetics professor, who gave the inventor an audience last month in Boston, Mr. Heins said.

Mr. Khan said he was surprised by the acceleration effect, which he said had the potential to increase the efficiency of electric motors in a wide range of common applications. He was dismayed, however, to see his name linked to reports, many of which characterized the invention as a "perpetual motion machine."

"I can't understand how he can even breathe the words 'perpetual motion.' He plugs it into the wall," Mr. Kahn said, adding he, too, has been flooded with calls and e-mails.

In an e-mail to Mr. Heins, he wrote: "Any talk of perpetual motion, over unity efficiency, etc. discredits you, now me, and your ideas." He added that he would not be interested in endorsing

the device until "the foolishness is stopped of hinting that your motor violates fundamental laws of physics."

He said Mr. Heins may have made a valuable discovery that could improve motors, but said a battery of tests is now required to measure the efficiency gains and qualify the science behind the invention.

The key to his model is the interaction of electromagnetic fields with the motor, which speed up a magnetized wheel when it should slow it down.

"With my system, when you load it, the speed goes up, and you actually have to lower the power going to the motor to maintain speed," he said.

It's analogous to using the light and heat produced by a lightbulb to power the bulb itself, with energy to spare, a heretical notion in thermodynamics.

Mr. Heins said he believes Perepiteia could revolutionize the energy industry and reduce global dependence on oil. His next goal is to produce a prototype of an electric car that uses the invention.

A $15-million offer was already put on the table by Jacques Nichols, the Portland-based self-declared "godfather of startups," Mr. Heins said.

The idea of using magnets in this way first came to Mr. Heins in 1985 while he was studying electronics at Heritage College in Gatineau.

Because he was working out of his basement, he used an electrical motor to generate electricity, a counterintuitive method that prevented earlier discovery of the phenomenon.

In 2005 he founded Potential Difference Inc., and a few weeks ago moved his lab into loftier digs at the University of Ottawa

Mr. Heins' personal investment in the device has cost him his marriage, custody of his two daughters, aged 4 and 7, his restaurant and his savings.

But he said is driven by an obligation: "Until we stop killing each other for oil, I'm going to keep doing what I'm doing. Sooner or later the rest of the world is going to catch up with me."

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TheStar.com - Ontario
TORONTO STAR
(February 28, 2009)

Electric Motor Polarizes Opinion

CHRISTOPHER PIKE // Tyler Hamilton

Ottawa inventor Thane Heins is steadily winning supporters for his electrical motor, which he claims can produce more energy than it consumes. While many are skeptical of the theory, no one has been able to disprove it. (Feb. 12, 2009)

Fierce debate rages around entrepreneur Thane Heins' dogged pursuit of green engine

Thane Heins, tired and a little grumpy after a long flight from California, walks onto the stage of an Ottawa conference room and begins a sales pitch that usually raises more eyebrows than money.

One of three entrepreneurs chosen earlier this month to present at a "Pitch The Dragons" contest, a spin on the CBC show *Dragons' Den*, Heins has invented a technology that he says will put out more energy than it consumes. His invention, he boldly claims, offers a way to make electric cars that can travel hundreds of kilometres from the energy in a small, inexpensive battery.

It's a tough crowd. One of the contest judges is TV-show judge Robert Herjavec, a multimillionaire who just minutes earlier shared with the audience his own story of success and the life it now funds - the fancy gas-guzzling cars, the mansion, the luxurious yacht.

The two men are oil and water. Heins, who wants to help the world kick its fossil-fuel addiction, immediately gets his back up. Herjavec is dismissive from the get-go.

â€œIt turned into a shouting match in front of 300 people,â€ Heins says later that day. "I didn't mind him kicking sand in my face, but the thing that really got me is when he said I don't get it. He pushed me a little too far and I fought back."

It was just another day for this underdog entrepreneur, a man trying to convince mainstream society he has discovered something real, which in this case means it has broken a major law of physics.

The *Star* first profiled Heins and his controversial invention a year ago. In a nutshell, he had figured out a way to eliminate the electromagnetic friction that typically limits the performance of an electrical generator -- an effect known as "Back EMF". Not only that, but he also learned how to redirect that magnetic energy so that, instead of causing resistance, it gave an electrical motor connected to the generator a significant boost.

The result, as far as Heins was concerned, violated Lenz's law or what's often called the law of diminishing returns. For many, that equates to a perpetual motion machine, an impossible claim in the conventional field of physics.

Within no time the story spread globally across the Internet, became chatter on blogs, and triggered a flood of email to this reporterâ€™s inbox â€“ some praising Heins for his determination, others calling the Star irresponsible for giving credibility to his claim. The story, love it or hate it, was the second-most read article on TheStar.com in 2008.

Much has happened over the past 12 months. Heins still operates out of a lab out at the University of Ottawa, he continues to evolve his invention, and he routinely demonstrates those improvements to the world by posting videos on YouTube.

"The last video I watched still showed evidence of some fundamental misunderstandings of physics, combined with wishful thinking,"• said Seanna Watson, an electrical engineer who is also a member of a scientific group called Ottawa Skeptics.

Heins gave the group a demonstration of his technology shortly at the Star's story was published. Two months later Watson posted a critique online titled "In This Town We Obey The Law of Thermodynamics."• Yes, she admitted, the electrical motor does speed up without any increase in input power, but increased speed does not automatically mean an increase in mechanical work.

"Heins appears earnest and basically honest, but persistently self-deluded," Watson wrote. "While the speed-up behaviour of the generator currently lacks an established explanation, there is no reason to think that it represents any challenge to currently known laws of physics."

It's a criticism Heins has heard before: You haven't proved you're right, so you must be wrong. At the same time, nobody has been able to prove he's wrong.

Some want to believe, or have kept an inquiring mind. Heins has been contacted by NASA, heâ€™s had several investors, entrepreneurs, engineers and academics show up at his lab for a demonstration. Heins always obliges -- he says he has nothing to hide.

At one point last spring, rock legend Neil Young wanted to adapt Heins' invention to power a 1959 Lincoln Continental MK IV, which is being entered into the $10-million automotive X-Prize -- a contest in search of the world's most efficient automobile.

Heins, Young, and his engineer Uli Kruger had much dialogue over email and telephone about the rock star's "LincVolt"• project. At one point, Heins sent Young some information by email on the performance of his generator and copied the message to dozens of other people unrelated to Young's project.

Young replied to Heins that he didn't appreciate his private email being broadcast to the world. "Please do not do this again!"• he wrote, but then quickly breezed over the incident. "This in no way negates my enthusiasm and curiosity about your project,"• he assured Heins.

Heins, not one to worship the famous, sent a terse response: "I just sent you an email with proof that my generator violates the Law of Conservation of Energy and you are worried about your private email? Are you serious?" He accused Toronto-born Young of being shallow.

The relationship eventually fizzled. Two week after that exchange, Young, in an email to the *Star*, was still gracious in his assessment of Heins' invention. "I am impressed -- it is on our list of things to watch."

Day by day, bit by bit, Hein' passion and persistence is steadily gaining him supporters -- people convinced that what they're seeing is important enough to move the technology out of the lab and into real-world applications.

Through his Ottawa-based company Potential Difference Inc., Heins has been in serious talks with a designer of small wind turbines in Montreal, a senior engineer from a large utility in Turkey, and a small manufacturer of electrical equipment in Toronto. He's altered the design of his prototype as well by developing a high-voltage "self-excited" motor coil.

"We can use it to accelerate (the motor shaft) from 100 revolutions per minute to 3,500 without adding an ounce of power," according to Heins.

His most promising partnership so far is with California Diesel & Power, a $10-million company that sells back-up generators for cellphone towers throughout California. AT&T is one of its largest customers.

Owen Charles, head of technology at California D&P, viewed Heins' demonstration videos on YouTube last year and was intrigued. He flew to Ottawa for a live demonstration and was convinced the technology worked, at least enough to pursue it further.

"There's acceleration, but what I don't see is being able to harness more power out than power in," said Charles during a phone interview. "But Thane is starting to get more and more watts, more power, out of the coil, in addition to the acceleration."

Heins made a prototype for Charles, who's been demonstrating it to customers and contacts throughout California. During a demonstration to some AT&T contacts the motor was spinning at its full rated capacity using only 75 watts of power, when normally it takes 250 watts to do the same work. "To me, that makes the motor a hell of a lot more efficient."

In the diesel generator business, it means Heins' technology at the very least can be used to get much more work out of a generator using the same amount of fuel. That' s enough for Charles, who wants to license the innovation. "We're trying to become a West Coast hub for this type of technology."

But is it perpetual motion? "It has the potential to be that," said Heins. "But there are many hoops we have to jump through before we get there." Still, he believes that getting there is achievable. To add credibility to his claim, he plans to pay the U.S. Department of Energy's Oak Ridge National Laboratory to evaluate the technology.

It doesn't help, however, that Heins often undermines what credibility he has earned. At times he seems to exaggerate the significance of certain events and relationships. He's written emails to former U.S. vice presidents Dick Cheney and Al Gore claiming he's got a way to eliminate the world's dependence on oil and bring the troops home from Iraq. It's the kind of behaviour that makes people turn away, not pay attention.

He's also working with The Orion Project, a non-profit group founded by conspiracy theorist Steven Greer, who has founded several UFO groups and claims to have been in contact with extraterrestrials. Greer believes the government is aware that perpetual motion machines exist and that there has been a massive global cover-up.

Still, all the doubt and scepticism could vanish if California D&P actually makes a more efficient generator. The company has also entered the automotive X-Prize with plans, like Neil Young once had, to use Heins' generator.

"Within a month or two months, we should have that generator in a car," said Heins. "All we're going to try to do is run the car in the conventional mode, measure the number of miles we get out of it, then put our generator in and see if we can get more miles out."

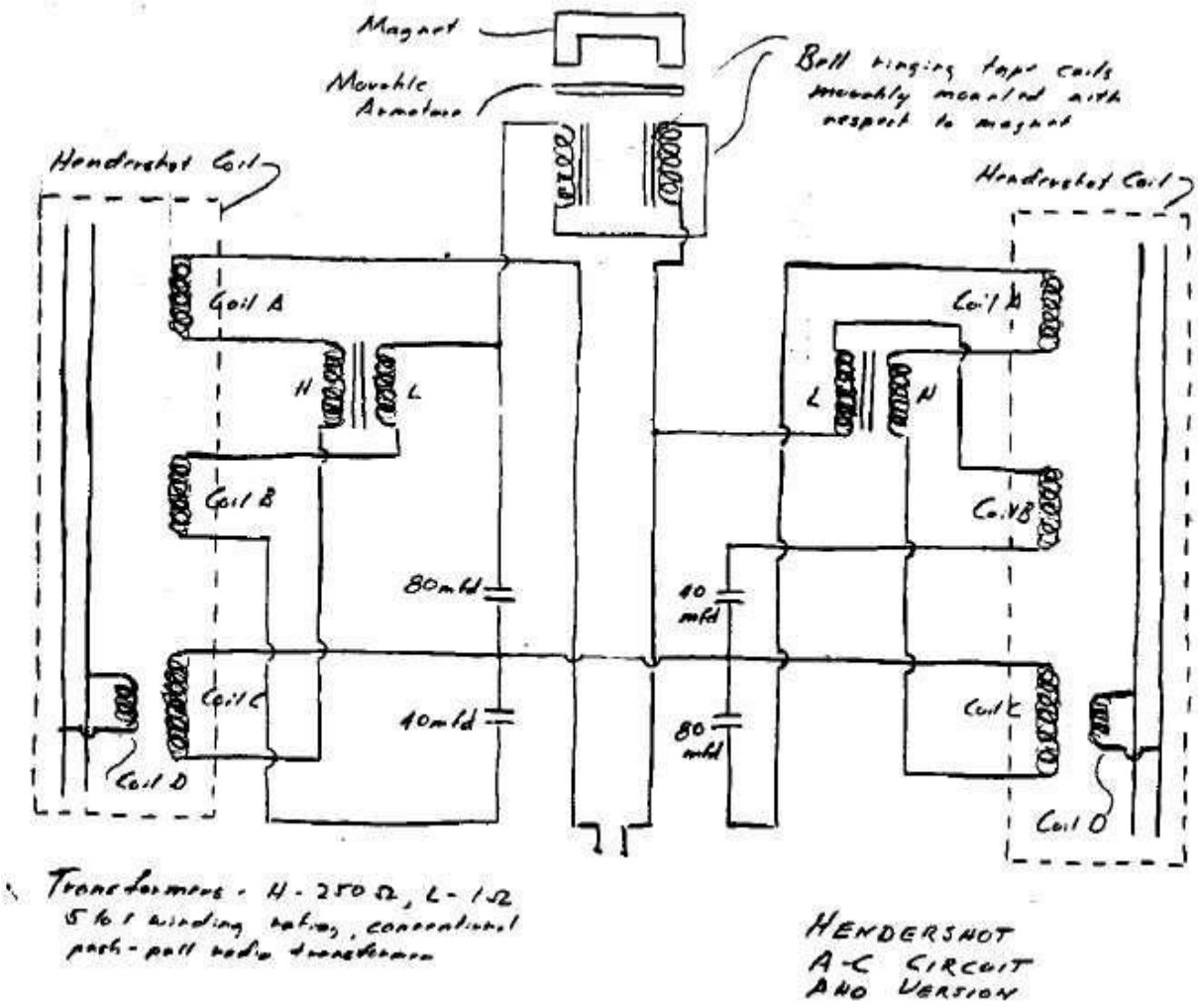
If it demonstrates the dramatic improvement Heins expects to see, maybe Al Gore will pay attention.

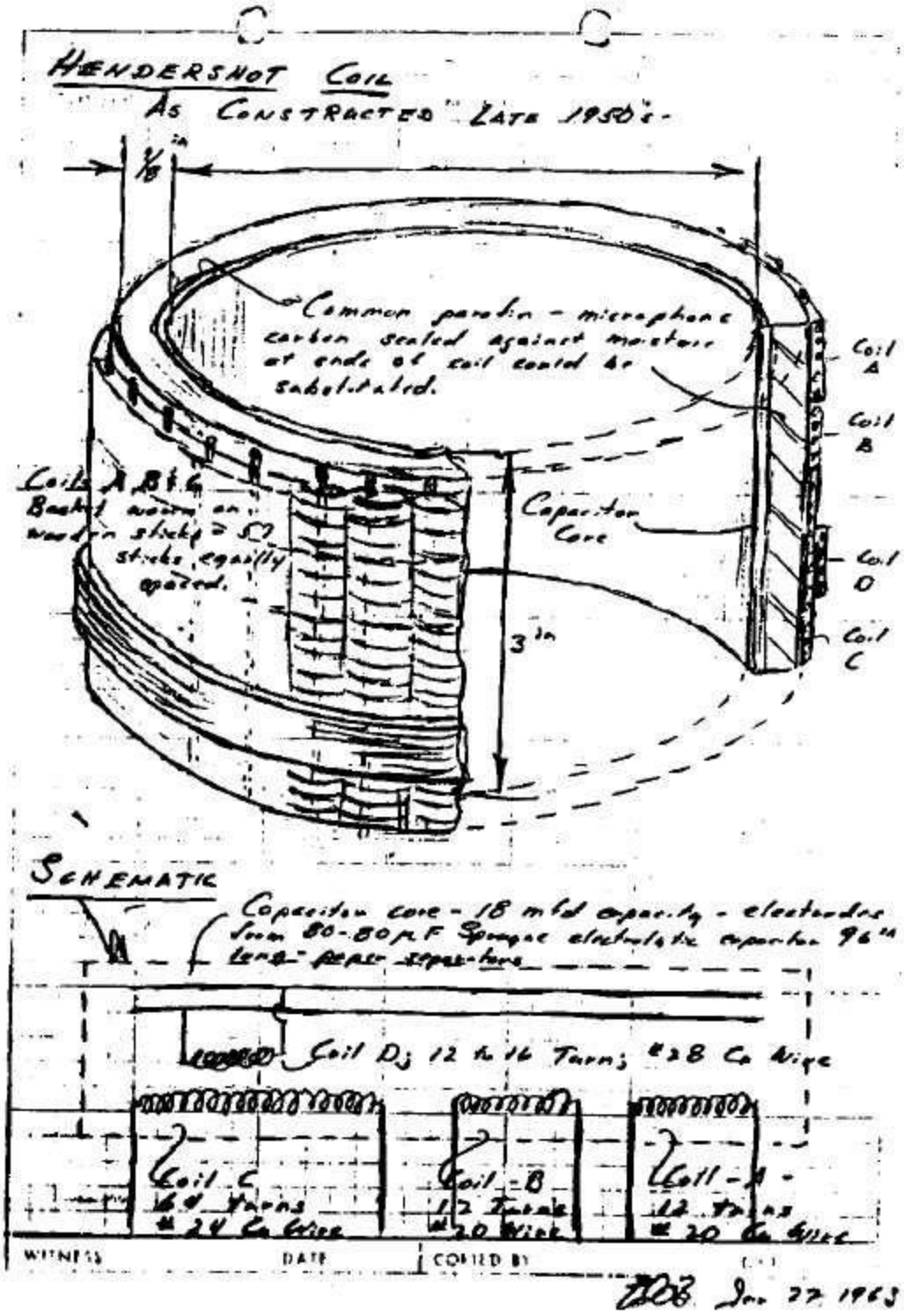
Lester HENDERSHOT

Fuelless Motor

Lester Hendershot

Borderland Science **(March-April 1989) -- Report by Edward O'Brian (patent attorney, retired) (PDF)**





New York Times **(Sunday, February 26, 1928)**

"Fuelless Motor Impresses Experts"

W.B. Stout Says, Invention Works Uncannily --- Washington Thinks It's Important ~ Built On A Radio Principle ~ Armature Winding New -- Invention Inspired By Young Son -- Lindbergh Flies Here

Detroit, Mich, Feb. 25 -- W.B. Stout, head of the Stout Air Lines and designer of the all-metal tri-motored Ford Monoplane, declared here today that he had seen what he characterized as an "impressive" demonstration of the Hendershot fuelless motor two weeks ago in Pittsburgh.

Lester J. Hendershot, the inventor, and his associate. D. Barr Peat, who is manager of the Bettis Field at McKeesport, demonstrated the motor secretly yesterday in a hangar at Selfridge Field. This block test was witnessed by Major Thomas G. Lanspier, Clonel Charles A. Lindbergh and others.

It was explained today that the model used in the demonstration was a much smaller machine than an actual working motor capable of developing enough power to lift and propel an airplane. Its designers claim for it that it runs on an electromagnetic principle, bywhich it draws its force directly from the earth's field, and through the properties within the motor itself transforms these electric currents into power tha can be delivered efficiently at a propeller shaft.

Calls Demonstration Uncanny

"The demonstration was very impressive", Mr. Stout said. "It was actually uncanny. I would like very much to see how a large model designed to develop power enough to lift an airplane would operate".

Mr. Stout said the model he saw was about the size of the tiny motors used in vacuum cleaners.

"I was told that the revolutionary feature was a hereto unknown manner of winding the armature", Mr. Stout continued. "Hendershot said he had succeeded in winding it in such a way that it draws energy directly from electrical currents which exist constantly in the air or in the ground. Such sources of cheap and inexhaustible power, of course, never have been reached before. The small model appeared to operate exactly as Hendershot explained that it did".

Neither Colonel Lindbergh nor Major Lanphier would express themselves at length on the test they witnessed yesterday. Major Lanphier admitted, however, that they were experimenting with it and referred all questions to Hendershot.

"He is the only one who knows all about it", the Major said. "Lindbergh has nothing to do with it, although he saw it".

William B. Mayo, chief engineer for the Ford Motor Company, was in conference with Major Lanphier, Hendershot and Peat at Major Lanphier's quarters today.

"Invention Result Of Dream"

Hendershot Made First Fuelless Motor For His Son's Toy Plane

The invention of the fuelless motor, tested at Detroit, was the result of a dream by its inventor, Lester Jennings Hendershot, who lives on "the street back of the railroad" in this town of about 3,000 inhabitants, 15 miles from Pittsburgh.

Although Hendershot was on his way from Selfridge Field today and is not expected home until tomorrow, his wife told of his conception of the machine and how the miniature model was constructed from the parts of a worn out radio which had been given to the inventor by his uncle.

Several years ago the vision of a machine which would operate from "earth currents" came to Hendershot in a dream, according to his wife, but it was not until last November that he actually started working on it.

His 4-year old boy had built a small airplane at that time and was considerably chagrined because it would not operate. The father was disturbed too, so he told his son he would build an airplane which would work. The result of that was the fuelless machine.

First Model Worked Toy Plane

When the miniature motor model had been constructed, Hendershot built a small airplane and placed the machine in it. A switch was turned and immediately the propeller began to move. The machie was not connected to any electrical current, but was running on is own accord from "earth currents".

For several weeks the little motor and the airplane rested upon a small table in the living room of the Hendershot home, which faces an unpaved street near the railroad tracks. One day D. Barr Peat of Bettis Field, the air mail port near McKeesport, Pa., visited the Hendershot home to see the model.

He immediately became enthusiastic and a few weeks later he and Hendershot were at Selfridge Field where permission was been granted to build a model large enough to operate an airplane.

Hendershot, who is only 29 years old, was born in Hyndmann, Pa. His schooling has not been extensive, although he spent a few months several years ago at Cornell University, where he took a few courses in mechanics. He has not been employed at any particular task and has been known as a "freelance" worker. He has been a fireman and an engineer on the railroad, has worked in the mills near Pittsburgh, has inspected concrete and done electrical work. During the war he was a bugler with a machine gun company, but did not get overseas.

Still Wants To See "How They Work"

According to his mother, he has always been interested in mechanics and when a child he would insist upon taking his playthings apart.

And that desire has not escaped him a man, for even now he takes his own son’s playthings apart to "see how they work".

It required only a few weeks for him to construct the miniature model of his fuelless motor, although he worked day and night during that time. He had a crude workbench in the cellar of his home, which was placed near the furnace, where it was warm. Early in the morning he would be there, tinkering about, and late at night he still could be found there.

Hendershot's idea was that the earth currents which make the aurora borealis in the skies could be harnessed by man and made to produce power that would operate an engine.

The youthful inventor has no other inventions to his credit.

"Works On Principle Of Compass"

Lester J. Hendershot first came to Bettis airplane field in McKeesport between two and three years ago, and soon afterward brought one of his motor models to the officers of the field for inspection.

The fuelless motor works somewhat on the principle of a compass, and the original model would always operate when pointing north or south, as does the compass, but would not move when pointed east or west.

Young Hendershot worked nearly two years to overcome this defect, and finally he brought a motor to the Bettis field that appeared to be working perfectly. This motor was installed in a small model airplane and the plane flew, but owing to the failure to rig it properly, it crashed to the ground during on of the experiments.

Constantly improving the motor, Hendershot finally interested D. Barr Peat, manager of the Bettis Field, in his invention.

After a short time several capitalist were interested, and a few weeks ago the motor was taken to Detroit by Hendershot and Peat for an exhibition.

While no person at the field was in position to say authoritatively, it was stated that the capitalists who become interested in the Hendershot motor have about completed their arrangements for the purchase of the invention, or for controlling its production.

The fuelless motor, it is said, appears to have tremendous power and easily made between 1500 and 2000 revolutions per minute on several occasions while being tested at the field. Pilots and mechanics believe it to be the greatest invention of the age, and all appear sure it will be a practical success as an airship motor.

It was stated at the field that the inspection of the motor by Colonel Lindbergh was made in the interests of the capitalists who were arranging to purchase the invention.

***New York Times* (February 27, 1928):**

"Fuelless Motor Is A Generator"

The Hendershot "Fuelless motor" is not a motor at all but a generator, according to Major Thomas G. lanphier, commandant at Selfridge Field, Mich., where he with Lester J. Hendershot, the inventor, and D. Barr Peat, have been quietly working on an experimental model.

Major Lanphier said he first became interested in the Hendershot electrical machine several weeks ago through Peat; that in common with others he thought at first it was more or less "bunk" but after seeing it work he became interested.

"I saw the first model which Hendershot built hooked up to a small electric motor of the type used to operate a sewing machine. It not only ran the motor but it burned it out", Major Lanphier said.

Why this generator acts as it does, where the energy comes from that transforms it into power, Major Lanphier was not prepared to say beyond quoting Hendershot. It is the inventor's theory that his machine draws its energy from the earth's magnetic field. While unwilling to describe it in detail until pending patents have been received, Major Lanphier told a little about it. The first model consisted of a ring magnet less than three inches in diameter. Around the magnet were coils rigged as only Hendershot knows how to rig them, and another set of coils pass through the center of the ring.

"With this contrivance we burned out the sewing machine motor and we also kept a 6 watt lamp going with it for 26 hours", he said.

The larger model which has not yet been hooked to a motor that will deliver power to a crankshaft, Major Lanphier himself helped build.

"We put it together out of stuff we picked up at the field and with it we lighted two 110 watt lamps", Major Lanphier said. "I think that we have got enough electricity in this second model to kill a man".

The second model is built around a ring magnet, the outside diameter of which is seven inches and the inside diameter six inches.

It was suggested that perhaps the Hendershot engine was "stealing" power from some big radio broadcasting station.

"We thought of that", Lanphier said, "but we ran it for 26 hours when stations were going and when they were not and we got the same results".

New York Times **(November 12, 1928)**

"May Seek Motor Patent"

M. C. Kelly to Ask Five Scientists to Test Hendershot Device

Representative M. Clyde Kelly of Pennsylvania, it became known here today, plans to seek a Congressional patent for the "fuelless" motor of Lester J. Hendershot of West Elizabeth, Pa., if five scientists approve the invention as practical. A Congressional patent gives the patentee full protection for 17 years.

Hendershot's invention, which he describes as a "magnetic induction" motor, was first announced in March. At that time in some quarters it was regarded with skepticism.

The motor, according to its inventor, is without visible means of power. It obtains its initial impulse, Hendershot maintains, from a precharged magnetic core, and its secondary and greatest power impulse by magnetic induction from the earth.

Hendershot today said several of his motors had been built here, and that one, which developed 60 horsepower, had been in operation for two weeks without recharging the magnetic core.

New York Times **(February 28, 1928):**

"Explains Magnet In Fuelless Motor"

Hendershot Says Shifting Its Field To east And West Causes Rotary Motion ~ Winding Of Magnet Secret ~ Inventor Asserts Engine Weighs But 4 Ounces Per Horsepower

Mildly indignant because the manner in which his fuelless motor gains its power had been misrepresented in dispatches from Detroit and Washington, Lester J. Hendershot today stated there was nothing mysterious about his motor, that the force that energizes it is the "same force that pulls the needle of the compass, and there is nothing mysterious about that".

The fuelless motor was not his objective, he explained, at the time he began his experiments some three years ago, when he first became interested in aviation.

"I soon learned that the ultimate development o aviation depended upon the discovery or invention of an absolutely true and reliable compass", he explained. "The ordinary magnetic compass does not point to the true north -- it points to the magnetic north, and varies from the true north to a different extent at almost every point on the earth's surface.

"There is another compass, the magnetic induction compass, that indicates true north. But it must be set before each flight, and is not always reliable.

"I found that with a pre-magnetized core I could set up a magnetic field that would indicate true north, but I didn't know just how to utilize that in the compass I set out to find.

"In continuing my experiments, I learned that by cutting the same line of magnetic force north and south, I had an indicator of the true north, and that by cutting the magnetic field east and west, I could develop a rotary motion.

I now have a motor built on that principle that will rotate at a constant speed, a speed predetermined when the motor is built. It can be built for any desired speed, and a reliable constant speed motor is one of the greatest needs of aviation.

The main secret of Mr. Hendershot's invention, his Friend Barr Peat declares, is the method of winding a magnet in the motor so that it will rotate in the opposite direction than the earth revolves. He says there is no heat, because magnetic forces are cold and the motor is stopped only by breaking the magnetic field in the windings. The magnet in the motor, he thinks, probably would have to be recharged after about 2000 hours of operation.

Mr. Hendershot declares that one of his motors, complete and ready to be installed in an airplane would weigh little more than four ounces for every horsepower it developed, while the best of the gas engines now built weighs about two pounds per horsepower.

Mr. Hendershot says that altitude would not affect the efficient operation of his motor, for the magnetic influence of the earth has been found to remain the same as high as man has ever reached.

He said that the same principle which made his original model operate only when it was placed in one direction, north and south, will be developed so that it will provide a compass that will always indicate true north.

Lester J. HENDERSHOT

Generator & Motor

Mark Hendershot : The Lester J. Hendershot Story

Tom Brown : The Hendershot Motor Mystery

Mark M. Hendershot : From The Archives of Lester Hendershot

Utility Engines : The Secret of the Hendershot Motor

Hyiq.org Notes

NuTech2000 : The Hendershot Mystery

Patent Application

See also : HENDERSHOT1

From the Archives of Lester J. Hendershot

by

Mark M. Hendershot

THE LESTER J. HENDERSHOT STORY TOLD BY MARK M. HENDERSHOT

My name is Mark Hendershot, Lester J. Hendershot was my Father.

Lester was an inventor and in his many attempts at producing practical items, he had a moderate success a few times with electronic toys, and had sold some of his ideas to small manufacturers. His biggest idea, however, was so revolutionary that it embarrassed the nation's top scientists because they couldn't explain it, and if it could be perfected, it would possibly eliminate the need for public electric utilities in many instances, and it would completely change most of our present concepts of motivation.

His earlier invention was called a "motor" by the newspapers, but it was actually a generator which was powered by the magnetic field of the earth. His later models created enough electricity to simultaneously light a 120 volt light bulb and a table model radio. I witnessed it furnishing the power to run a television set and a sewing machine for hours at a time in our living room.

It was in 1927 and 1928 that my Father began to think seriously about this "fuel-less" generator. He had taken up flying in 1925 and he soon realized that the ultimate development of aviation would be greatly enhanced by the creation of an absolutely true and reliable compass, and his first efforts were to produce such an instrument.

He theorized that the magnetic compass did not point to true north and varies from true north to a different extent at almost every point on the earth's surface. Also, the induction compass has to be set before each flight and at that time was not always reliable. He claimed that with a pre-magnetized core he could set up a magnetized field that would indicate the true north, but he didn't know just how to utilize that in the compass he had set out to develop.

In continuing his experiments, he found that by cutting the same line of magnetic force north and south, he had an indicator of the true north and that by cutting the magnetic field east and west, he could develop a rotary motion.

With this principle in mind, he switched his plans and began working on a motor which utilized this magnetic power. He built one that would rotate at a constant speed, a speed pre-determined

when the motor was built. It could be built for a desired speed, he said, and he felt that a reli-able constant speed motor was one of the greatest needs in aviation at that time. The one he built developed 1,800 revolutions per minute.

In the following years, he realized that the idea of a magnetically powered motor was not as practical as a magnetically-powered generator, so his later work was directed toward the generator.

To avoid confusion, it should be pointed out that the early experiments began on a magnetically-powered motor, and later a generator.

The first significant experiments on the motor version were held at Selfridge Field, Detroit, under the direction of Major Thomas G. Lanphier, commandant of the field and leader of the First Pursuit Group.

The device demonstrated at Selfridge was a small model of what he hoped would be developed into an airplane engine [powered by earth's magnetic field]. Quotes in the newspapers referred to top aeronautical brass of the day and their impressions of what they saw.

One such report was credited to William B. Stout, president of the Stout Air Service, Inc., and designer of the all-metal type plane used by the Ford Motor Company. Stout's comments were: "The demonstration was very impressive. It was actually uncanny. I would like very much to see a large model, designed to develop enough power to lift an airplane."

Major Lanphier's comments to reporters after the demonstrations were:

"The whole thing is so mysterious and startling that it has the appearance of being a fake."

"I was extremely skeptical when I saw the first model," he continued, "but I helped to build the second one and witnessed the winding of the magnet. I am sure there was nothing phony about it."

My Father had first shown the military brass how his model worked, then he supervised army technicians in building their own model, which worked perfectly. Major Lanphier said that the electrical men to whom they had shown the motor "... laughed at the way we wired it up and said it wouldn't work. Then it DID work."

It was the Selfridge Field experiment which touched off the series of stories in the national press. Stories with blaring headlines in such papers as the Detroit Free Press, Detroit News, Detroit Times, Pittsburgh papers, The New York Times, and many others. Most of them tagged the instrument demonstrated at Selfridge the "miracle motor," and there were pictures of Major Lanphier and Col. Lindbergh, my Father and the motor.

Anything in the news during that period which could be connected with Lindbergh was front page whether he had an active interest, or just happened to be in the area at the time.

Headlines in the various papers read, "Gasless Motor Tested for Lindy," "Lindy Inspects Fuelless Motor for Airplanes", and "Lindbergh Tries Motor That The Earth Runs."

One story even stated that, at its request, Lindbergh and Lanphier were flying to New York to show the motor to the Guggenheim Foundation for the Promotion of Aeronautics.

Later reports, however, emphasized that Lindbergh actually had nothing whatsoever to do with the experiments, and that he had just witnessed a couple of the demonstrations as the guest of his friend, Major Lanphier.

The Selfridge tests seemed to satisfy Lanphier and his associates, how-ever, and during the period he was there, the model the technicians built obtained as high as 1,800 revolutions per minute and they announced its performance was entirely satisfactory. It was estimated these motors would run for 2,000 to 3,000 hours before the magnet center would have to be recharged.

A man named Dr. F. W. Hochstetter, of the Hochstetter Research Laboratories in Pittsburgh, hastily called a news conference and displayed models of what he said were the "Hendershot Motor." He demonstrated them, and when they wouldn't work, he declared Hendershot was a fake, and that the motors worked only because of power derived from concealed pencil batteries.

After he exhibited his models of the motor, Dr. Hochstetter announced that they wouldn't generate enough electricity to, "...light a 1-volt fire-fly" or to "...stitch a fairy's britches."

Noting the lavish lecture room in a New York hotel which had been rented by (or for) Dr. Hochstetter for the press conference, Dr. Hochstetter was asked [by one reporter] why he was so interested in the Hendershot demonstrations and in trying to discredit them. He replied merely that he had "come to expose a fraud which would be capable of destroying faith in science for 1,000 years" and he claimed his only motive was that "pure science might shine forth untarnished."

It was obvious to those who were pro-Hendershot that, in view of all the fuss and bother of such a noted scientist as Dr. Hochstetter, somewhere behind it all, someone was anxious for the innovation to be ridiculed.

When approached with the accusations, my Father smiled and told reporters, "Dr. Hochstetter is correct, to a degree. I have concealed batteries in a model or two because I found that I could not trust some of my visitors, and I also had evidence that someone had tampered with my work. So, I put a couple of batteries in on occasion to lead the intruders away from what I was working on."

He added that Major Lanphier and his army technicians were proof enough of his claims. "I didn't build the motor that was demonstrated at Detroit," he pointed out.

"That was built by Army men under orders from Major Lanphier and under my direction. I didn't even so much as wind the motor. They built the motor and it works. That's my answer to all the critics—it works."

Dr. Hochstetter and his associates also claimed my Father had signed a contract and received $25,000 for exploitation of the motor, but after a brief period of excitement, the matter was dropped—unproven.

Not long after his demonstrations of the motor, Dr. Hochstetter died under unusual circumstances. He was in a Baltimore and Ohio train wreck, and he was the only passenger on the whole train who lost his life!

My Father was the butt of many jokes and comments at the time of the debates about his invention. An artist, drawing for one of the Pittsburgh papers, depicted him in a cartoon riding a propellorless airplane. The caption made fun of him.

In later years my Father remarked, "Every time I see a jet plane go over now, I think of that cartoon and how everyone laughed at me for suggest-ing a plane could some day fly without a propeller. Twenty-five years ago I tried to tell them that."

As suddenly as it all started, the publicity and sensationalism of the Hendershot motor stopped. The last news story to appear was on March 10, 1928, when a small article appeared in most papers saying that Lester Hendershot was a patient in Emergency Hospital in Washington.

The personal account he gave was much the same as the newspaper quote, with the minor exception that he was it by a bolt of 220 volts, not the jolting 2,000 the over-eager reporter had written. He was demonstrating the motor in the patent office, and the shock paralyzed his vocal chords, resulting in several weeks of recuperation before he completely recovered.

Something happened during this period that could explain the actions of Dr. Hochstetter and his associates. My Father said that while he was in the hospital, he was approached by a large corporation to stop his activity in connection with the motor or generator.

Until the day he died, he would not reveal the name of the company, only that if he were successful with his generator, it would be a serious threat to their multimillion dollar industry. He named the sum he accepted as $25,000, and the condition was that he was not to build another unit for twenty years. That's when he dropped out of sight.

I've thought about the bizarre events connected with the generator, and feel it is possible the "large corporation" first tried to stop the activities through Dr. Hochstetter. When this failed, they approached my Father personally and bought him off. It's interesting to note that one of the doctor's charges was that he was paid $25,000 to exploit his work. Isn't it odd that this is the same figure actually paid, but to stop his activities, but was quoted before he was approached with the offer?

My Father admitted that he and the family lived in constant fear, as we were being contacted every so often by crackpots who had delved into the records and discovered his creation, and had gone to the trouble of searching him out. Some of them, he suspected, were representatives of subversive groups and/or foreign powers.

This latter charge seems a little exaggerated, but was supported by a series of letters he received from a fellow in Ohio in 1952. He had traced my Father by going back to his hometown in Pennsylvania and talking to my uncle about the generator.

The first letter explained that he was a part of a group of scientists who were privately financing their own research on the same phenomena my Father discovered in 1928. He emphasized they would not allow backing by any organization or government since an invention such as the Hendershot Generator should be for, "all the peoples and should not be controlled by national governments, but should be given gratis to the World Government when it is ready to assume World Responsibility."

He was critical of my Father for allowing the military to look at it in 1928.

That letter was written in April, and in June a postcard came with the following terse message, "Will shortly make public via radio and news-paper, connection your generator with 'Flying Saucer Propulsion.' Request Security Clearance from Security Chief your group within forty-eight hours. Have succeeded in duplication of your Generator."

In July my Father received a four-page hand-written epistle from the Ohio man. To my knowledge, it was the last letter the writer sent on the subject. He discussed information his intelligence had received on flying saucers, modestly admitting his sources were better than the CIA or the FBI, which he claimed had investigated him several times. He intimated that a Pasadena scientist had recently been kidnapped because he was working on an attempt to adapt the generator to aircraft.

Then he went into a long and rambling dissertation on how he got interested in what he called the "Ether Vortex Phenomena" and the generator. He explained that the magnetic field in the earth and volcanic action are related, according to his studies. He had spent two and one-half years in Japan working with Japanese volcanic scientists on the subject.

He mentioned one study he had made, and pointed out that the shift of the strata causing the volcano was due to a rotation of the Electromagnetic Field of the volcano at high speeds. He urged my Father to write a complete paper on his findings and publish them (preferably send them to the Earthquake Research Institute in Tokyo).

Referring to a particularly bad earthquake which had just occurred in the Los Angeles vicinity a few months before, the writer warned my Father not to operate his generator in the area near the San Andreas (seismic) Fault which runs through the area.

He said, "You may not believe it, but you can cause earthquake activity to increase if you continue to operate your generator in that district. I am wondering if you were not directly responsible for the recent earthquake near Los Angeles?"

Then he promised that he and his associates would keep the possibility of his involvement in the earthquake to themselves.

Letters such as these, plus occasional phone calls when the callers would not identify themselves, and a threat from an admitted Communist which was turned over to the FBI, caused my Father concern much of the time. If a large organization would take over the generator and its re-search, all he wanted out of it was enough money to take care of himself and his family in the future years.

One of the most encouraging offers came in September of 1956 when my Father received word that officials of the Mexican government wanted to meet with him and discuss the possibility of using his generator for the rural development program in Mexico.

Government officials flew to Los Angeles and drove out to our house, where our family doctor who spoke Spanish acted as interpreter. Arrangements were made for the family to go to Mexico City, and for my Father to work with Mexican technicians on the generator.

We all flew to Mexico City and were housed in an apartment near the home of the Director of Electricity. My Father supervised the Mexicans in building a model. He had been working with them for several weeks becoming more and more tense as time passed. He confessed to my Mother that he was frightened because he understood no Spanish, and his fellow workers talked constantly in little groups by themselves, often glancing over at him. He couldn't understand a word they were saying, and it worried him considerably.

One morning in February of 1957, the laboratory called and asked where my Father was. My Mother told them he had left for work in the morning, and if he wasn't there, she had no idea where he might be. She became increasingly concerned as the day passed and there was no word from him.

That night he didn't come home, and we were on the verge of hysteria by next morning, then we received a telegram from Los Angeles. My Father's fear had worked itself into a nervous frenzy and he had rushed to the airport the day before and taken a plane for California. To the day of his death, it was a closed subject and he would never explain why he was compelled to leave us so suddenly under such strange circumstances, except that he feared for his life.

The final attempt to promote the generator came in the latter part of 1960 when a Dr. Lloyd E. Cannon convinced my Father that he had the facilities to present the project to the United States Navy for research and development.

Cannon said he was the General Manager of his own company, Force Research of Los Angeles, Palm Springs and the Mojave Desert. Cannon explained that his group was made up of many dedicated scientists of various fields who contributed time and knowledge to Force Research projects. The range of experimentation covered electronics, astronautics, free energies, propulsion, and parapsychology.

Under my Father's supervision, two models were built and 100 copies of a fifty-six-page "proposal" were printed for presentation to the various government agencies and politicians who would have to review the project for its consideration.

After the completion of the proposal and it had been sent to the government with no results, Cannon traveled the southwestern United States with the models trying to raise money for research. His visits were increasingly less frequent to our home until 1961, when a tragic climax to this story occurred.

On April 19, 1961, upon returning home from school, I found my Father dead. It was recorded as a suicide without any further investigation. For those who might be interested in my Father's analysis of how his generator worked, the following are his theories on the subject:

This field of magnetism surrounding the earth is similar to the field of magnetism in a man-made generator.

The rotor of a generator is revolved by some means of power, cutting the lines of magnetism, creating electric power. The earth is turning inside of a field of magnetism. That, no one contradicts, yet it is claimed there is no power to be derived from it.

Let's say we have a mechanism that will collect, polarize and create a positive and negative connection to this tremendous power that is ever-present on the earth.

Take a survey compass. You can hold the needle east or west, and let go of it, and it immediately goes north and south. This same power, when cut by the proper apparatus as the earth rotates inside this magnetism, will produce power, the amount of which is not calculated at this time.

As long as the earth rotates around the sun, it will create electric power which some scientists claim does not exist. Yet, we dig into the moun-tains for material that costs us unbelievable sums, to create the same power.

This magnetism surrounding the earth is in the same relation to electric power as uranium is to atomic power. Earth's magnetism is ever-pres-ent at any height or depth. It is equal to uranium as a by-product for power, namely electricity.

Magnetism must be cut. The lines of force circling the earth are constant and if this force is broken up, and polarized, you have the equivalent of uranium broken up, which creates a heat and in turn creates power.

Breaking up the forces of magnetism, polarizing them, thereby creating a resistance for power, is the same principal as atomic energy.

Scientists claim it requires friction to generate electricity. I claim the earth rotating as it does, according to scientific theory, creates friction as a generator. The ever-present magnetism is the field, or stator.

We have only to utilize this source of power to light every home, high-way, bridge, airplane or any type of thing that cannot now be lighted because of inadequacy of present facilities.

A very small unit composed of wire, a magnet, several especially designed coils, condensers, collector units, and a few other minor items, will cut this force. Another especially designed mechanism will polarize it, giving a positive and a negative connection to any resistance and the result is the generation of electricity.

There you have the theory of how to create electricity from the magnetic force of the earth, as written by a man with only a high school education.

As years went by I've always wanted to continue with my Father's invention, but have worried myself about possibly running into the same problems my Father did.

It would not do my Father justice just to stop all work on it and now I am ready to fulfill his dream. Since childhood I have been fascinated by electricity and have spent over twenty-six years in the electrical trade.

Of his three sons, I alone have pursued this fascination and have applied my knowledge and experience to carry on my Father's work.

The Hendershot Motor Mystery

Compiled by Tom Brown
(Borderland Sciences Research Foundation, Inc., 1986)

(PDF, 12.3 MB)

F.D. Fleming : The Hendershot Motor Mystery (FATE, Jan. 1950)

Gaston Burridge : The So-Called Hendershot Motor (BSRA Round Robin, March-April 1956)

Ed Skilling : A Story of Free Energy (J. Borderland Research 18 (5/6), July-August 1962) & Energy Unlimited # 13

J.G. Gallimore : The Lester J Hendershot Motor (Private research papers released to BSRF)

From The Archives of Lester Hendershot

Compiled & Published by Mark M. Hendershot

(PDF, 11.7 MB)

The Lester J. Hendershot Story

Published Articles

Photographs

Letters

Assembly Instructions

The Secret Of The Hendershot Motor

Revealed by Utility Engines

(PDF, 1.5 MB)

Preface

Version 2

Principles of the Hendershot Motor

The Earth Inductance Compass & the Hendershot Motor

Drawings

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http://www.hyiq.org/Library/Lester.J.Hendershot.htm

Referenced in the article: "THE SO-CALLED HENDERSHOT MOTOR by Gaston Burridge" is an article by the company Utily Engines. This is very good data and some data can be verified in other areas.

NOTE: "In the May, 1953, issue of "Fate" magazine appeared an advertisement from the "Utility Engines' professing to have plans for sale of a so-called Hendershot motor for $2.50. Suddenly, all mail was rejected by the address of the "Utility Engines"! I asked Hendershot about this matter. He told me he learned of it soon after the advertisement was published. Soon after that he learned about the plans they were selling and using his name. They were doing this, Hendershot claimed, without his permission or consent. He told me that he promptly informed the postal authorities of this circumstance. "They must have done something about it, for I heard nothing more about them," he said. Hendershot was quite emphatic to me regarding the plans put out by the "Utility Engines" not being of his device. He was so emphatic, in fact, I felt he, like the maiden, "didst protest too much". Thus, 'the Ol hound dog's nose' went to the ground! In due

course it came up with the information furnished by an acquaintance of Hendershot's to the effect that Hendershot had remarked at the time, while the "Utility Engines" information was not his device, "it was pretty damn close!""

Also:

"The first model consisted of a ring magnet less than three inches in diameter. Around the magnet were coils rigged as only Hendershot knows how to rig them, and another set of coils pass through the center of the ring."

The second model is built around a ring magnet, the outside diameter of which is seven inches and the inside diameter six inches."

The Hendershot Mystery

Compiled by NuTech2000 (Australia)

(PDF, 36.5 MB)

Power & Prejudice

The Hendershot "Fuelless" Motor

Hendershot's Solid State Generator

Hendershot's Mark II Solid State Generator

The Mark III Hendershot Device

The Hendershot Enigma

Newspaper Transcripts

Book References & Magazine Articles

Mark Hendershot : The Lester Hendershot Story

Patent Draft

Principle of Earth Induction Compass

Lester Hendershot's Patent Application

Lester Hendershot's Patent Application

My invention relates to the production of electric current, & has for its object to generate current for power & lighting purposes., & any other uses that it is desired to make of it.

Referring to the drawings, in which like parts are similarly designated:

Fig. 1 is the diagrammatic view of one construction.

Fig. 2 is similar view of another construction.

Referring to Fig. 1: I use a small collector 1, preferably a small metallic plate horizontally disposed and having a downwardly extending flexible strip 2 of magnetic material terminating opposite a core 3 of a first coil 4 to be attached thereby. The strip 2 has soldered to it one end of a copper wire 5, which may or may not extend to the collector proper 8, whose other end is soldered to the middle of the inner winding or layer of a second coil 6. This coil is composed of turns of no. insulated copper wire, & is provided with a permanently magnetic core 7, and is preferably parallel to the first coil. The core 7 and its windings 6 lie in the center of a honeycomb coil 8 that has two windings, each composed of turns of no. wire, the windings being cross wound. The ends of the winding 6 are each connected by connecting wires 9 & 10 respectively, to an end of one of the crossed windings of the honey-comb coil 8 and the other ends of the windings are then connected to the power lines or terminals 11 & 12 respectively. The ends of the first coil 4 are respectively connected to two coils 13 & 14 wound in opposite directions, each consisting of -- turns of no. wire & provided with soft iron cores 15 & 16 respectively. The coils 4, 13 & 14 are connected in series in a preferably permanently closed circuit with a resistance 17 included between the coils 13 & 14, and in the structure that I have made, this resistance is small of about Meg. Ohms. The coils 13 & 14 are substantially parallel to the honey-comb coil, one on each side of the longitudinal vertical central plane of the apparatus. The core 3 is soldered to a set of small transformer plates 18 & forms an extension of these plates. These plates have openings in their center for the reception of a fine wire coil 19, composed of turns of no. wire. There is no core through coil 19. The inner end of coil 19 is connected to one line terminal 11 at 20, and the outer end is connected by wire 21 to the third coil 22 of turns of no. wire, whose core 23 has metallic connection with the transformer plates 18. The core 23 may be omitted. The end of the outer turn of coil 22 is connected by wire 24 to the inner turn of a second fine wire coil 25 like coil 19 but wound in the opposite direction, and the outer end of this coil is connected at 26 to the other power line terminal 12. The fine wire coil 25 is placed in the interior of laminated transformer plates 27, identical with the plates 18 and the coil has preferably no metallic core, and the transformer plates 27 are separate from those 18. The direction of the winding of the coils is indicated by arrows.

A lamp or small motor connected across the ends of the power lines or terminals 11 & 12 will operate continuously when the longitudinal axis of the device is directed north and south, and will cease to produce power when deviated from the north & south direction. That is to say, the motor will stop or the lamp will cease to glow. To overcome this objection for some purposes, and in order to permit the structure to operate in any direction in which its axis is placed, I have modified the structure of coil 8 and the parts within it; all other parts remaining same. The extension 2 of plate 1 is connected by wire 5 to a small pivoted soft iron plate 28 within a short coil 29 of turns of no. wire, between brass end plates 30, and is held in a soft iron yoke 31 by a screw 32 that passes through one pole end of a ring magnet 33. The screw 32 serves to hold the yoke 31 to the magnet pole end and at the same time holds the coil 29 in the yoke 31. The plate 28 is pivoted in one of the brass end plates 30. The coil 8a is a single wire cross wound coil having turns of No. wire. One end of this coil is connected by wire 9 to one end of the coil 29, and the other end to the line wire 11. Surrounding this coil 8a is a second coil 8b of the same

size wire and the same No. of turns. The other end of coil 29 is connected by wire 10 to one end of the second and outer honey-comb coil 8b whose other end is connected to the other power line terminal 12. It will be noted that in both constructions shown the coil 4 extends across one side of the coil 8 or the two coils 8a & 8b and also across the coil 6 or 29. That coils 6 & 29 lie within the coils 8 or the 8a & 8b , and the axis of coils 4 & 29 as well as coils 4 & 6 must be substantially parallel. Also the axis of coils 13 & 14 are substantially parallel to the honey-comb coils 8, 8a and 8b. I claim-

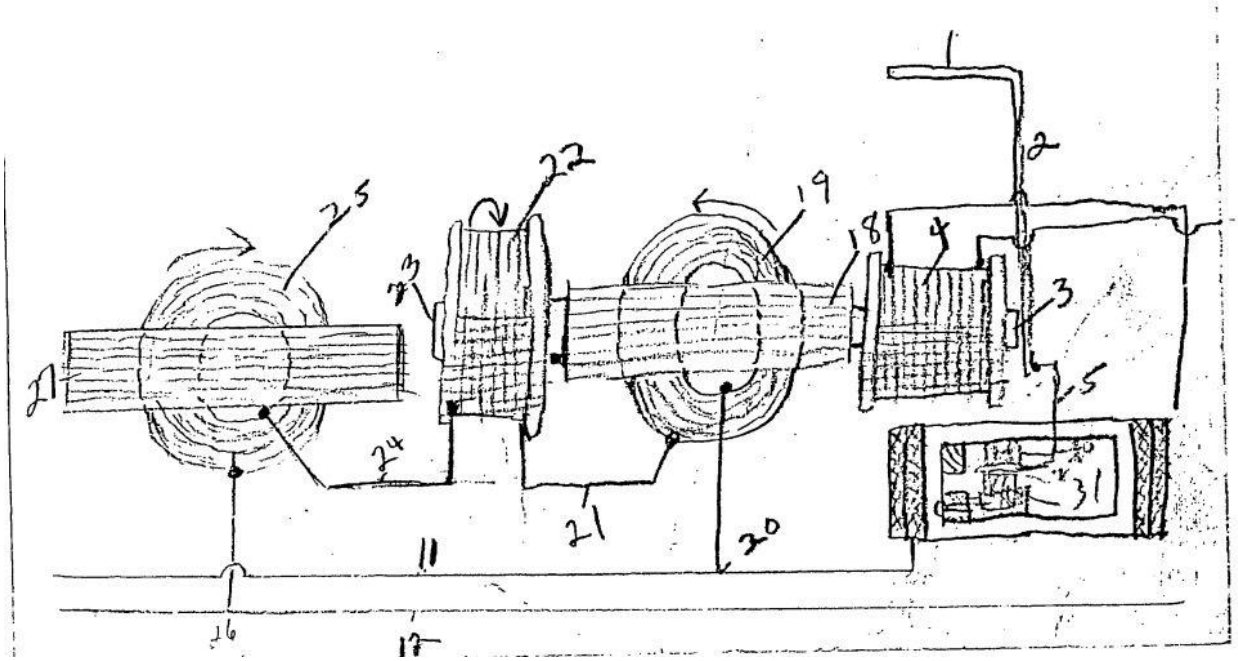
1. In an electrical apparatus, a collector, a coil having a honey-one end of which is in attracting relation to a portion of said collector, a honey-comb coil having two windings connected to power terminals, a second coil in the honey-comb coil each end of which is connected to one of the windings of the honey-comb means to send electricity from the collector to said second coil , a pair of oppositely wound coils parallel to the honey-comb coil & connected in series with the first coil, a fine wire coil, transformer iron, surrounding the fine wire coil, a third coil, a second fine wire coil, transformer iron surrounding the same, said third coil & fine wire coils connected in series across the line.

2. In an electrical apparatus, a collector having an extension, a coil having a core one end of which is in attracting relation to said extension, a honey-comb coil having two windings perpendicular to the coil & its one end connected to power terminals, a second coil within the honey-comb coil, each end of which is connected to the opposite end of one of the honey-comb windings, a permanent magnet is or in inductive relation to said second coil, means to send current from the collector to the second coil, a pair of oppositely wound coils, said first coil connected in series between said pair of oppositely wound coils, a fine wire coil, transformer iron surrounding said coil having a continuation that forms the core of the first coil, a third coil between which and the first coil said transformer iron, and fine wire coil is arranged a second fine wire coil wound in an opposite direction to the first fine wire coil, transformer iron surrounding the second fine wire coil, said fine wire coils being connected in series through the third coil & across the power terminals, and the fine wire coils arranged in rectangular relation to the first & third coils.

3. In an electrical apparatus, a collector, acoil having a core one end of which is in attracting relation to a portion of said collector, a honey-comb coil having two windings connected to power terminals, a second coil in the honey-comb coil each end of which is connected to one of the windings of the honey-comb coil, means to send electricity from the collector to the second coil, a pair of oppositely wound coils parallel to the honey-comb coil & connected in series with the first coil, a resistance between said oppositely wound coils, a fine wire coil, transformer iron surrounding the fine wire coil, a third coil, a second fine wire coil, transformer iron surrounding the same, said third coil & fine wire coils connected in series across the line.

4. In an electrical apparatus, a collector, a coil having a core one end of which is an attracting relation to a portion of said collector, a honey-comb coil having two windings each, connected at one end to power terminals, a second coil in the honey-comb, traverse thereto and parallel to the first coil& connected to the other ends of the honey-comb windings, a permanent magnet in inductive relation to said second coil means to send current from the collector to said second coil, a pair of oppositely wound coils parallel to the honey-comb coil, a resistance between the oppositely wound coils, said coils and resistance included in series in a closed circuit between the ends of the first coil, a fine wire coil, laminated transformer iron surrounding said fine wire coil but not passing there throughh and having an extension that forms the core of the first coil, a third coil between which and the first coil said transformer iron and fine wire coil is arranged, the first & third coils being wound in the same direction, a second fine wire coil wound in opposite direction to the first fine wire coil, laminated transforme iron surrounding the second fine wire coil but not passing there through said third coil connected between the two fine wire coils in series across the

power terminals.
5. In an electrical apparatus , a collector, a coil having a core one end of which is in attracting relation to a portion of said collector, a honey-comb coil having two windings each connected to a power terminal, a ring magnet in the honey-comb coil, a second coil in the magnet and connected in series between the windings of the honey-comb coil, a pivoted oscillating member within the second coil, means to conductively connect said collector and member, a pair of oppositely wound coils adjacent the honey-comb coil & connected in series with said first coil, a fine wire coil, transformer iron surrounding the fine wire coil, a third coil, a second fine wire coil, transformer iron surrounding the last coil, said third coil & fine wire coils connected in series across the power terminals.
6. In an electrical apparatus , a collector, a coil having a core in attracting relation to said collector, a honey-comb coil having two windings each connected to a power terminal,, a ring magnet in the honey-comb coil, a second coil in the magnet whose axis is at right angles to the axis of the honey-comb coil, a pivoted oscillating member within the second coil, means to conductively connect the collector and member, a pair of oppositely wound coils adjacent the honey-comb coils parallel thereto & connected in series with the first coil, a fine wire coil, transformer iron surrounding the fine wire coil, a third coil, a second fime wire coil, transformer iron surrounding the last coil, said third coil connected in series between the fine wire coils across the power terminals.
7. In an electrical apparatus, a collector substantially horizontally disposed and having a substantially vertical extension, a coil having a core in attracting relation to said extension, a honey-comb coil having two cross wound windings each of which is connected at one end to power terminals, a ring magnet within the honey-comb coil, a yoke shaped extension connected to one of the ends of said magnet, a second coil held in said extension parallel to the first coil, a soft iron member pivoted in the second coil, means to electrically connect said extension and member while permitting independant movements thereof, a fine wire coil, laminated transformer iron surrounding the fine wire coil and having an extension that form the core of the first coil, the third coil arranged at right angles to the first coil, a second fine wire coil wound in a direction opposite to the winding of the first fine wire coil & papallel thereto, laminated transformer iron surrounding the last coil, said third coil arranged between the fine wire coils in series and the series connected across the line terminals.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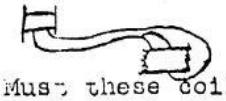
CHARLES LINDBERGH'S ATTORNEY AT THE TIME

Attorney at Law-Patent Causes
Tele. Maine 3008

Henry Orth Jr.
902 F Street N.W.
Washington, D. C.
Feb. 4, 1928

Dear Sir:-
I should like to know the following:

1. Can the aerial plate be vertical & can it be turned in any direction?
2. Can the aerial plate be vertical & pivoted so that the plate & extension can swing to & from the core 3?
3. Can coil 6 be arranged at right angles to the position shown?
4. Need core 7 pass thru coil 6?
5. Are coils 13 & 14 provided with cores?
6. Coils 13 & 14 offer considerable resistance. Cannot a high resistance be used in place of these two coils & the resistance 17?
7. Can the plate 28 remain stationary?
8. Must the coil 4 be connected as shown or could it be connected so?



9. Must these coils 13 & 14 be so placed that one shall be on one side & the other on the other side of the longitudiual vertical central plane through the apparatus?
10. May fine wire coil 19 have a core connected to the transformer iron? Apparently if this were done you would have double the no. of turns cut by the flux, & if so, what is the effect?
11. Can the transformer iron be ommitted?
12. Must coil 4 extend only partly across coil 8?
13. Can coil 4 be shifted at an angle or at right angles to coils 6 or
14. Can the aggregate of coils 22-19 be placed parallel to coil 8?
15. Can the direction of winding of one of the fine wire coils be reversed

These are important questions that come to mind & will be of great importa in determining the strength of the patent, and if you can possibly do so, answer these from your new experiments and no. your answers to correspond to no. of the questions. I enclose preliminary draft of the description & claims & wish you would fill in the data as to the no. of turns & sizes of wire for different coils. Return the description with such additions & corrections as you are able to make. You will note that the draftsman has omitted the copper wire from the collector 1 extending along extension 2. I see no reason why this can not be done & he has probably done this under your instructions. If this cannot be done, I will have drawing corrected.

Claim 1, which is the broadest claim, must be stripped of all unnecessar parts, & I will ask you to give this point careful consideration. If at the time you receive this letter you have had time to make additional test or experiments, please come down here for a short conference.

Joseph HIDDINK

Capacity Changer

http://www.groupkos.com/eso/tiki-index.php?page=One-Terminal+Capacitor

One-Terminal Capacitor

The Capacity Changer, in all its simplicity, is a pulse-converter of the Coulomb charge upon one plate of a two-terminal capacitor, which becomes a capacitor having only one terminal when the plasma stream inside of a glass tube (commercially available ultraviolet lights) extinguishes. The plasma serves as the disappearing capacitor terminal of the Capacity Changer device.

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http://www.keelynet.com/interact/archive/00000405.htm as retrieved on Apr 28, 2007 12:59:36 GMT.

One Terminal Capacitor

Jerry W. Decker // KeelyNet
Tue, 29 Jun 1999

Hi Folks!

Comes here an interesting email regarding a 'one terminal capacitor' which you should be aware of thanks to the inventor Joseph Hiddink. This is the email he sent me along with my response and initial questions. Do check it out if you are so inclined;

Ajax, Ontario, Canada June 29. 1999

In 1933, Hitler ordered his Engineers to build a Flying Disk, that could come off the ground, without any sound, could fly at great speed, without any sound, and it had to be invulnerable. His engineers had read about Vandegraaff's ideas.

The Vandegraaff is a monopole high voltage generator, to a degree. Vandegraaff thought, that if he put his sphere to ground,and charged it up to five million volts positive, the sphere would be positive, the ground would be positive, and plus repels plus, ergo: Liftoff.

So he was invited to come to Germany to do it. But when the sphere was on the ground, it only went to 3000 volts, and that did not do a thing. So in 1937 they switched to magnetics. And yes, by 1941, the day before Hitler invaded Germany, they had reached a weight reduction of their Flying Machine of 120 pounds.

Trouble was, the machine, which even looked like a Flying Saucer weighed two tons. So Hitler scrapped it and went in with the rockets.

Seeing a picture of a Flying Saucer in 1967, and noticing these spheres underneath, I asked myself where we use a sphere in the physics literature.

And yes, it was written in the physics books since the 1800's as a problem. Probably thought up by Faraday himself. I got it as a problem on my final exam Physics in Holland. :

Two metal concentric spheres form a capacitor C.

This is charged up to a potential V.

Then the outside sphere is removed.

The remaining sphere is a 1-terminal capacitor with a capacity c.

The potential on this sphere is C/c x V. If C+ 1 microfarad, and c = 50 micromicrofarad, and V = 1000 volts, we get a momentarily pulse of 20 million volts.

And that is positive all alone, or negative all alone. Of course that is difficult to do with these spheres, so the books caution that it was "Just a theoretical problem".

But what if we can make a 2-terminal capacitor that can be charged up, and then can be changed into a 1-terminal capacitor? That is what I invented 30 seconds after thinking about it..

This type of capacitor is inside every sphere, with the 1-terminal part connected to the sphere. As no charge can exist inside the sphere, it flows to the outside.

If a sphere sits on the ground, and gives such a pulse, the first pulse may not do much, but the succeeding ones do. Earth will repel that sphere. And once off the ground, the electrical field off the sphere (with succeeding pulses) "sees" the earth's magnetic field as "ground" and tries to get away from it.

And that is how it works. The saucer shape is nothing but a reflector. Steering is accomplished by applying the proper amount of power to each sphere with a joy stick. A sixteen year old girl with heavy glasses and normal IQ could fly it.

Offered to Canada as a birthday present in 1967, it was ridiculed by the NRC (Canada), as nobody ever could invent such a capacitor, and as thus it was rejected. Confronted many years later with the patent, they had to lamely admit, that it could be done after all, but the NRC (Canada) was &quotSure that it could not work, no funding!&quot.

After which the President of that institution retired immediately But not before exhorting his successor to keep this invention in the ridicule section. His successor became head of the

Canadian Space Agency. If you apply for a patent, you need the signature of two witnessse, who declare that they understand the invention.

One of the witnesses required, was a German, now Canadian Engineer, who had worked on Hitler's Flying Disk. &quotMy God, why did nobody think about that before...? Why did I not think about that before...?"

And he told me about Hitler's Flying Machine that never worked. &quotWhen the project was terminated, we were sworn to secrecy about it, but that is nonsense now, you found it. .. Why did I not think about it before...?" He happens to be the world's foremost expert on the parts to make this capacitor.

Offered to Nasa, the Rocket Experts at the Propulsion Lab, where I was referred to, were &quotNot interested, thank you.!" You can figure out why.

We can fly to the Moon in three hours, if need be, uncomfortable. Or in comfort, using a constant 1.1 g acceleration in two days. Mars in a few weeks. No osteoporosis and no barfbags. The Space station and all that nonsense is obsolete.

Of course, anyone who can find out how a Flying Saucer works must be an idiot. that is, what I was told at the different &quotScientific" Institutes in Canada.

Invention was evaluated by Hermann... (forgot his last name) of the Hudson Institute for Strategical Studies at $600 Billion. Now probably Trillion.

Found 1200 applications, from &quotStarwar" cars that float, electrical engines that need only a battery to start, airplanes that reach any place on earth in two hours, all VTOL, no airports needed, to inexpensive power generators, weather control, tornadoes, hurricanes, earthquakes etc... Oil as an energy source will be out. No pollution and no noise.

Just new to the net I will probably get my own site and start to advertise some applications. I have to make some money too. I wondered of course why the Patent Office never figured that this invention should be &quotclassified", but you never argue with the dumbells that look after your security. Your security Council was informed before too.

Threaten the President of the US, and CIA and FBI will be at your doorstep in five minutes. If all of the US could be in danger, if this invention is used by another party, who cares... Do have a nice day.

Regards Joseph Hiddink - President Gravityx
e-mail: vliegschotel@yahoo.com

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http://www.keelynet.com/interact/archive/00000534.htm.

Joseph Hiddink ((no email))
Sat, 17 Jul 1999

Ajax, Ontario, Canada July 16 1999

Dear Jerry:

I read in one of the missives, that some people are a little bit confused about plusses and minuses of voltages. I will try to explain once again:

Draw a circle on a piece of paper. This represents the sphere.

Now draw a capacitor inside that circle (A capacitor is drawn, electrically, by two parallel lines that do not touch. Make one of the lines solid, and draw a connection to the circle (sphere).

Draw the other line in stipples like - - - - - -, with swiches on both sides of the stipples / - - - - - - \ .

They are in the 'on' position, and that side of the capacitor is active.

Now connect a battery with the minus to the solid line , via a switch. / --

Connect the plus of the battery to the stipple line part of the capacitor, via a switch / , When both switches are thrown, the capacitor C (which will have a size of e.g. 1 microfarad) will reach your battery voltage

Q =3D CV

Now we put both switches that are connected to the battery in the 'off' position. That capacitor is still charged, and the sphere would show 12 volt negative. Now the switches connected to the stipples are put in the 'off' position. That makes that side of the capacitor disappear, the solid line is left, and still connected to the sphere, as a 1-terminal capacitor.

But the capacity is now the capacity of the sphere. And that sphere, if it is a little bit bigger than three feet in diameter, has a capacity of about 50 micromicrofarad.,

That is 1,000,000 / 50 =3D 20,000 times smaller. But the voltage goes up 20,000 times. You get momentarily 240,000 volts. and that is negative in nature, like the solid line of your capacitor. And it carries the whole charge of the 2-terminal capacitor. This part is connected to the sphere.

If that sphere rests on the ground, the ground will try to absorb that voltage. But we, very cunningly, repeat the process, fast. And the ground gets another mouthful. But after a few mouthfuls, that part of Mother Earth gets fed up, and rejects the next appetizer.

The sphere comes off the ground. Sure, the ground will then become obstinate and eventually become positive right under the hovering sphere, which would attract the negative sphere, and as

positive attracts negative, crash it, accompanied by a short-distance lightning stroke, but the idea is to get away from it all, and after 'rejection' use the earth's magnetic field to take off to higher realms.

There will be a few guidelines for future Flying Saucer operators, probably on a computer screen.

Regards, Joe Hiddink

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http://www.mail-archive.com/interact@listserv.capital-master.com/msg00209.html

Re: [Keelynet] Looking for EM experiments not explaind by Maxwell

Wed, 26 Apr 2006

Joseph Hiddink

A Flying Saucer does not have silicon type spheres underneath, but metal ones. They are 1-terminal capacitors. Inside each sphere is a capacitor, that can be changed from a 2-terminal capacitor into a 1-terminal capacitor. When in the 2-terminal capacitor state, it is charged up to about 20,000 volts or less.

Then it is changed into a 1-terminal capacitor, with the 1-terminal connected to the metal sphere on the inside. The 1-terminal capacitor becomes now the capacity of the metal sphere. It is based on a practical application of a problem, devised by Faraday, written up in the physics books as impossible to do in practice. The problem, if you went to High School: Two concnetric metal spheres do not touch and form a capacitor C. This one is charged up to a potential V. Then the outside sphere is removed. The remaining sphere is a 1-terminal capacitor c. The potential on this sphere is momentarily: C/c x V.

Difficult, if not possible to do with spheres, which is the reason that the invention was ridiculed and the inventor insulted up to four months after the patent was granted.

Let me quote from the patent:

If C = 1/10 Microfarad (which is possible with the design) and is charged up to a potential of 10,000 volts, the charge is 1/10 Coulomb. When this capacitor gets changed into the 1-terminal capacitor (a sphere of about 2 meters, with a capacity of about 100 pF), the resulting electrical pulse is about 100 million volts.

Now, a Flying Saucer does not have to go this potential to get lift-off, propulsion and at the same time take power out of the air, unless they would like to destroy a town like Sodoma or Gomorrah. These "Angels" were human, who came in a Flying Saucer.

Tesla had an electric car, with an 80 HP electric motor, an antenna and some electronics. He drove it all the way from New York to Buffalo and back at speeds of up to 90 MPH. No gas. Just like a Flying Saucer, he took power right out of the air.

He refused to tell anyone how it worked, as he realized, that the system could also be used to give every home on earth free electric power. He had designed the Niagara Falls Power Plant for Westinghouse and the investors (Rockefeller and Morgan) would have killed him.

He did not patent it, but I did. My poor wife, reading all the letters of insult and ridicule, was very upset about it and did not want me to work on it, or she would have left me. She died recently amd now I am starting to work on it, slowly, as money is in short supply. Initial experiment in 1967, zapped all the HiFi's and TV's in the neighborhood (I fixed them all for free, but did not experiment at home anymore, as it also blew after a few seconds a big Power Transformer on a pole 100 yards away, luckily a Squirrel was blamed).

Next experiment in the "sticks" had me lightning coming out of the clear blue sky, when I connected the device with a dog-screw to ground, and generated three pulses of 500,000 volts. Offered to Nasa's Propulsion Lab in Cleveland, it was soldidly rejected by the engineers. "Thank you for sending us a copy of your patent!" Who needs a propulsion engineer, if we, when using this system can be on the Moon in a few hours or at Mars in a day or so, no matter where they are located at the time, and all that without barf-bags, heat-tiles, or ostoporosis? I believe that they tried it a few years ago and caused the big blackout in the USA and Canada, blaming a poor, innocent tree.

They did not know about what precautions to take. Any other experiment that you are working on is just a novelty without any real desirable results.

Regards, Joseph H.

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http://www.halfbakery.com/user/Joseph_20Hiddink

Joseph Hiddink

Gravity control is so simple, that I (who told the family at age six that I was going to invent that) told my mother on my thelfth birthday, that it was going to be so simple, that a high school student could have invented it. Guess what. The technology was described by Faraday in the 1850's. As a theoretical problem. Unfortunately the learned(?) professors in the years succeeding wrote in the physics books that it only could be done in theory, never in practice. The material to do it existed already in the days of Faraday. I got the problem on my final exam Physics in my (Dutch) High school. Two concentric metal spheres do not touch and form a capacitor C. This one is charged up to a potential V. Then the outside sphere is removed. The remaining sphere is a one-terminal capacitor c. The potential on this sphere is C/c x V. If C = 1 microfarad, and V= 10,000 volts and c = 50 micro-microfarad, we get a potential of 20 million volts. And that is positive all alone, or negative, all alone. Difficult to do with concentric spheres, so I invented a

capacitor that can be changed from a one- terminal type to a two-terminal type, gets charged up to 10,000 volts, after which it reverts to a one-terminal type of capacitor. That device is inside these spheres, seen in Flying Saucers. It takes a little bit of capital to build it, but not as much one rocket motor costs for the shuttle. Don't worry, the Nasa Rocket Propulsion Engineers were " Not interested, thank you!". So it probably will be used by another group that is interested in real space flight. We can reach the Moon in one day and Mars inside two weeks. Without the benefit of ostoporosis or barfbags. But who would deny those benefits to Astronauts? Not me. Joseph Hiddink vliegschotel@yahoo.com

[Nov 24 2000, last modified Dec 26 2000]

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http://patents1.ic.gc.ca/details?patent_number=1043434&language=EN_CA

CA 1043434
CAPACITY CHANGER

ABSTRACT

"The invention provides a capacity changer comprising at least one evacuated glass tube having an ionizable gas disposed therewithin and a pair of mutually spaced electrodes disposed within the glass tube and selectively connectable through a switch to a first power supply, the gas, when ionized, acting as a first capacitor electrode. A conductive coating on the outside of the or each glass tube forms a second capacitor electrode capacitively coupled to the first capacitor electrode when the gas is ionized, the first and second capacitor electrodes thereby forming a two-terminal capacitor. A second power supply is selectively connectable through a further switch between the second capacitor electrode and the first capacitor electrode when the gas is ionized, the second capacitor electrode further forming at least part of a 1- terminal capacitor when the gas is not ionized. The two-terminal capacitor formed by the ionized gas and the second capacitor electrode may be charged and then, when charged, converted into a one-terminal capacitor formed by the second capacitor electrode. In this way, very high voltages may be attained".

From: "Joseph Hiddink" <vliegschotel@yahoo.com>
To: <sterlingda@pureenergysystems.com>
Sent: Friday, June 29, 2007

Subject: Free Energy

Hi All,

In 1967 I had the good (?) luck to figure out the workings of the Flying Saucer. The Propulsion System and how they are powered by taking energy right out of the air or aether.

I built a small unit, went to 150,000 volts, got a heck of a poke and big bang was heard, the light went out. The Power Transformer on a pole 150 feet away had blown up.

I was called out on business. When I came home a new Transformer had been installed. A squirrel was blamed. My TV and HiFi had been zapped. I blamed the Power Company, bought a slew of transistors and fixed the sets.

A few weeks later I went to 500,000 volts, this time using long plastic rods to activate the switches and a scream from the kids above my workshop told me that the TV was on the blink again and so was the HiFi. Then the telephone of \all my neighbours around started to ring. "Could I come and have a look at their TV..?"

Being on of these Good Neighbors of which you read in funny Novels, I fixed all sets for free but did not experiment at home anymore. Next experiment was in the "sticks".

I got a lightning strike on the tree under which my Van was parked, set it afire, scared the daylights out of me and some poor farm dogs, which were instantly transformed into the fastest whippets you have ever seen.

As a good Patriot I decided to offer the invention as a Birthday Gift to Canada. Canada was 100 years old!

It was looked over by the National Research Council, the Scientific Arm of the Canadian Government. They concluded I was an Idiot. Nobody could ever invent the device I claimed to have invented, it said in the Physics Books that it was only a theoretical problem, originating by Faraday in the mid 1800's.

No matter how many times I wrote and explained, they finally wrote to tell me that my letters would be henceforth in the wastebasket, unopened.

Eleven years later, my (US) Patent Lawyer phoned me that the Patent was going to be granted. He urged me to inform the Governments of Canada and the USA immediately. "It is probably the biggest single invention I ever will have worked on and it could quite well be the Nobel Prize for you!"

Dr. Kahn of the Hudson Institute had told him that it had been evaluated at $600 Billion if the USA would have it before Russia. That was for the Space Application alone!

I wrote once more to the NRC. It was still ridiculed. I asked my MP to intervene. Four months after the patents were granted, the President of the NRC, Dr. Schneider, wrote a highly insulting letter (regarding me) to my MP., copy to the Premier, Mr. Trudeau, about this idiot, who did not know anything about Physics and could the Government do something to stop me from pestering them with his nonsense?

I wrote a polite letter to this President, stating that someone must have mislead him, as I had the Patent now. I enclosed a copy of the Patent.

A letter came back: "Yes, I had the Patent after all, but, "they" were sure that it could not work, no financial assistance!"

I offered to come to Ottawa and have lightning come out of the clear blue sky.

No answer. They tried it and the NRC Buildings were hit twelve times inside one hour. That item was even in the Newspapers!

Now they had lost "face". They decided to keep on denying and poohooing this minor invention. In the USA it went to the Propulsion Lab of Nasa in Cleveland, Ohio.

The learned gentlemen there were aghast. Who would need them if we could fly to the Moon in an hour or Mars inside a day?

They were being paid big bucks and were not going to kill the Goose that laid Golden Eggs and (of course not) kickbacks from the different suppliers.

"Not interested, than you for the copy of your Patent!" After the space disasters I believe that they decided to experiment with it and not knowing about precautions to be taken blew their own Power Transformer Station to Kingdom come and a poor innocent tree was blamed for the blackout.. One year after I got the Patents I went finally on the Web and read about a certain MR. Tesla. I realized that he had discovered the same thing. Two years later, while in the hospital with a heart-attack, due to a severe allergic reaction with Cashews. of which I had eaten a tin instead of making a TV dinner when my wife was visiting friends 600 Miles away, my wife came back home. She found the stack of rejecting and insulting letters and concluded that they were the reason for the heart attack. She did not want me to work on it anymore, the strain was too much for her. Love won.

She passed away two years ago and now I am working on it again.

First a unit that takes power out of the air to keep an industrial device with a 72 volt battery constantly charged.

Next, a unit for home power. Then the real electric car like Tesla had. Next the power for air- and spacecraft. The fourth industrial revolution is coming.

To ensure a long and happy life, I have given the complete circuitry to trusted people in Canada, the USA and Europe.

If anything would happen to me it will be splashed all over the internet.

The units will be leased, so as to get a constant income and keep the Tax man happy. Here in Canada the Ontario Provincial Government is not interested, the Politicians have their fingers in the Energy Pie, e-mail and faxes are not anwered. The Federal Government referred me to the Minister of the Environment who is all hopped up on getting the funding of many billions of

dollars to bury Nuclear waste. No answer from him either. For 100 Million Dollars we could fly it to the Moon or dump it at Jupiter.

A real spacecraft can be as big as a football field and be crewed like a Naval Cruiser. Don't worry, the US Navy People were not interested, neither were the US Marines interested in a floating of flying vehicle to be used in hilly country like Iraq or Afghanistan . The poor Oil Barons in Calgary got $510 Million to fight pollution. With $5 million I will get better results than they ever will get.

Patents are expired but I left one insignificant item out to ensure that an unfriendly power would not be able to use it.

When I get enough capital I will have to take at least 1000 patents out. There are myriads of applications. It is like inventing the wheel. Of course I might be on the wrong planet this time around.

You also will understand that it is not something that should go to a University.

Any disgruntled student could zap all the Computers, Cell-phones and even car computers.

Regards, JH

US Patent # 4,095,162
Capacity Changer

Joseph Hiddink

June 13, 1978

Abstract

A capacity changer device in which there is a first capacitor means of the 1-terminal capacitor type, and an enclosing hollow metal sphere enclosing the first capacitor means which may be spaced therefrom and being itself a 1-terminal capacitor with a current power supply for energizing a number of evacuated glass tubes containing an ionizable gas and forming part of the first capacitor means. It includes a second power suppy for direct current for charging the first capacitor means and connected also to the metal sphere for combining the charge to form a combination with the sphere of a change to a 2-terminal capacitor.

Inventors: Hiddink; Joseph H. (Ajax, Ontario, CA)

Current U.S. Class: 361/120 ; 307/110; 363/29
Current International Class: H02M 7/42 (20060101); H02M 7/54 (20060101); H02M 009/04 (); H01G 007/00 ()
Field of Search: 321/15 317/244 307/110 320/1

References Cited:
U.S. Patent Documents: 3562629 (February, 1971: Troubetzkoi) // 3652914 (March, 1972: Krausser)

This invention relates to improvements in capacity changers, and particularly, the change in capacity occurring when a small-value 1-terminal capacitor is changed into a substantial value 2-terminal capacitor, or vice versa.

SUMMARY OF THE INVENTION

An object of the present invention is to provide a capacity changer and its construction whereby there is achieved a change in capacity occurring in changing a small-value 1-terminal capacitor into a substantial value 2-terminal capacitor, and vice versa.

Another object of the invention is to provide the means for producing high potentials which can be positive or negative in nature and which are adapted for use in the study of nuclear structure and nuclear reactions.

Still a further object of the invention is to provide a novel and improved means for constuction and operation of a high power particle generator.

Another object of the invention is to provide a novel and improved device for generating potentials of either positive or negative nature of such magnitudes so as to attract, bend or repulse radiation.

Still another object of the invention is to provide novel and improved construction of a device for generation of potentials of either positive or negative nature, to attract or repulse mass.

A further object of the present invention is to provide novel and improved means and its construction for making an inexpensive, yet effective Intense Neutron Generator with possibility for slow to fast neutrom emission.

Still a further object of the present invention is to provide a novel and improved construction of a high power Radio Frequency Transmitter.

Another object of the present invention is to provide the means to generate strong electrical field which can be used to counteract other electrical fields or in conjunction with suitable electronic circuitry to detect interruption of said fields by the infiltration of foreign metal bodies, ore bodies, etc. These fields can be extended to several miles and are not affected by hot and cold layers of water.

Still another object of the present invention is to provide a novel and improved means which makes the generation of super high potentials possible, without having to resort to insulators that would be prohibitive in size or cost.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and advantages of the present invention will become apparent from the following description of the drawings, wherein:

FIG 1 shows a simple capacitor consisting of two conducting plates which are separated by a dielectric;

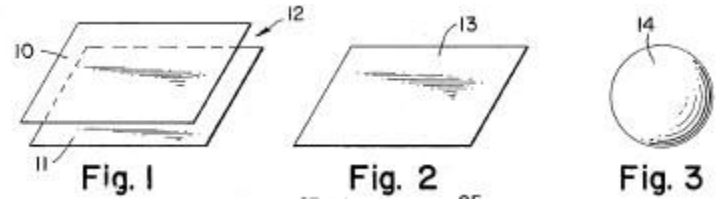

Fig. 1 Fig. 2 Fig. 3

FIG. 2 depicts a 1-terminal capacitor consisting of a single conducting plate;

FIG. 3 depicts a 1-terminal capacitor consisting of a conducting sphere;

FIG. 4A is a schematic circuit diagram showing the capacity changing circuit arrangement consisting of a 1-terminal capacitor and including a non-conducting gaseous discharge tube;

FIG. 4B is a schematic circuit diagram somewhat similar to FIG. 4A showing the realization of a 2-terminal capacitor including a gaseous discharge tube which is conducting, and in which the ionized gas acts as the second "plate";

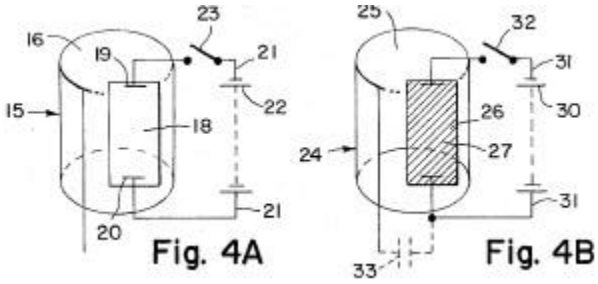

Fig. 4A Fig. 4B

FIG. 5 shows a schematic circuit diagram of a device drawn as a glow-discharge device using a power supply;

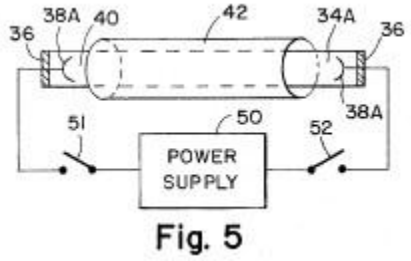

Fig. 5

FIG. 6 is a schematic circuit diagram similar to FIG. 5 but showing a filament type version; and

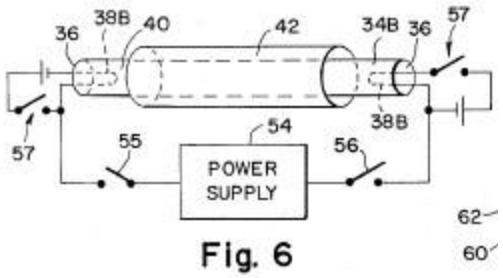

Fig. 6

FIG. 7 is an elevational and schematic view of a composite arrangement including several of the tubes shown in FIGS. 5 and 6 mounted inside a hollow metal sphere, with related power supply sources.

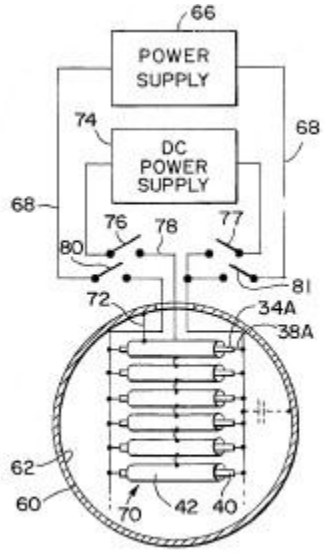

Fig. 7

BACKGROUND OF THE INVENTION

In the past, the changing of 2-terminal capacitors to 1-terminal capacitors have been regarded largely as theoretical problems and devices. As for generators of high potentials, (in excess of 10 MeV), positive, negative or alternating in nature, they have been seen to be costly, cumersom and to need a fair amount of insulation.

The present invention seeks to provide means and construction for attaining the foreging objects at relatively low cost and with good expectation of rewarding results.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In order to understand clearly the nature of the present invention, and the best means for carrying it out, reference may be had to be the drawings in which like numerals denote similar parts throughout the several views.

FIG. 1 shows a simple capacitor consisting of two conducting plates 10 and 11 which are separated by a dielectric medium 12 which may be air or other insulating medium. On the other hand, there is shown in FIG. 2 a 1-terminal capacitor 13 which consists of only the single flat conducting plate 13.

As shown in FIG. 3, there is depicted another type of 1-terminal capacitor 14 consisting solely of a hollow sphere 14.

Formulae for the calculation of the capacitance of various shapes of 2-terminal capacitors and of various shapes of 1-terminal capacitors as shown in FIGS. 1, 2 and 3 are well known and given in various textbooks on electricity. The following shows how such elemental knowledge of capacitors is applied in development of the present invention in a novel form and construction.

In FIG. 4A, the schematic circuit diagram shows the capacity changing circuit consisting of a 1-terminal capacitor 15 consisting of a plate 16 which may be cylindrical in shape, and encloses or goes around a non-conducting gaseous discharge tube 18 made of sealed glass or the like material, with electrodes 19 and 20 inside the tube, and which is connected via lead wires 21 to a battery 22 through a switch 23.

In FIG. 4B, the schematic circuit diagram shows the realization of a 2-terminal capacitor 24 consisting of a plate 25 which may be cylindrical in shape which goes around a gaseous discharge tube 26 which is conducting. The ionized gas 27 within the tube 26 acts as the second plate under the influence of the voltagee from battery 30 delivered via lead wires 31 through the switch 32. The capacitance is indicated by the broken lines 33.

As seen in FIGS. 5, 6 and 7, the basic capacitor of the present invention consists of one or more hollow tubes 34, 34A or 34B, which may be round, cylindrical or any other shape and made of non-conducting material such as glass. All of the tubes have end walls 36 at each end thereof and electrode terminals 38A or 38B are inserted through the sealed glass ends. The tubes are evacuated of air and filled with an ionizable gas 40 such as neon or argon, under suitable pressure. The tubes are partly covered with a conducting substance or coating 42, leaving the electrode terminals 38A and 38B free and insulated from the substance 42. The outside surface of each of the tubes 34, 34A and 34B are now for our purposes substance 42, which is a 1-terminal capacitor.

I have found that is is commercially advantageous to use a tube which does not have a phosphor coating, but which is otherwise similar to those used in the lighting industry. This type of tube, shown in FIG. 6, has heated filament-like terminals which make it possible to construct a high speed or fast-firing glow discharge circuit with a lower firing potential.

Thus, FIG. 5 shows the tube 34A drawn as a glow discharge device, using power supply 50, switches 51 and 52 and electrode terminals 38A. FIG. 6 shows the similar arrangement but with tube 34B connected to the power supply 54, including switches 55 and 56 and starters 57 at each end as is known in fluorescent lamp art.

Looking at FIG. 7, there is shown a hollow metal sphere 60 with a spherical chamber 62, with a number of tubes like those shown at 34A and 42 in FIG. 5 or at 34B and 42 in FIG. 6 inside the chamber 62. The sphere 60 acts also as a 1-terminal capacitor, having its own capacity (C equals 0.556 d) and C is the capacity of pF, and d is the diameter of the conducting sphere in centimeters. Even if each tube 34 has its conducting surface 42 connected to sphere 60, the capacity of the sphere remains the same, namely (C equals 0.556d).

If the gas 40 inside the tubes 34A or 34B is ionized by an ac or dc power supply 66 through wires 68 and the switches shown in FIG. 7, and electrode terminals 38A and 38B as seen in FIGS. 5 and 6, a 2-terminal capacitor is formed herein called capacitor 70. Ionized gas 40 in each tube forms one plate and the conducting surface 42 forms the second plate. The glass tubes 34A or 34B are the dielectric.

This 2-terminal capacitor 70 can be of substantial value, depending on the size, shape or number of tubes 34-42 used inside the sphere. It will be noted that, although the capacitor 70 can have a substantial value, the capacity value of the enveloping sphere 60 remains the same.

Instead of mounting the tubes 34A or 34B in a sphere, they can be mounted in any other type of container with a conducting surface connected to the coating substance 42 by a wire 72 as shown in FIG. 7. However, for some purposes described herein, a sphere is the most efficient form.

The 2-terminal capacitor array 70 can be charged by a direct current power supply 74, via switches 76 and 77 and conductors connected to the electrodes 38A or 38B on the ends of the tubes 34 on one side, and another conductor 78 going to the conducting coating substance 42 on each tube. Whether ionized gas 40 forming one plate of the capacitor or conducting coating substance 42 connected to sphere 60 as the other plate becomes positive or negative depends on the connection of power supply 74. Versatility can be achieved by using three-position switches or relays for switching at 76 and 77 of FIG. 7.

After the 2-terminal capacitor 70 has attained a charge, power supply 74 can be disconnected from the capacitor 70 by means of breaking the charging path via switch 76 or 77 or both. The connection from power supply 74 to conductors 42 should be broken to safeguard power supply 74.

The plate formed by ionized gas 40 in each tube can now be removed by disconnecting power supply 66 via switches 80 or 81 or both. When using a filament-type tube 34B as in FIG. 6, it is advisable to disconnect the filament-heating power supplies via starter switches 57 or both.

When fast action is required in the changing to state from 2- or 1-terminal capacitor operation, the gas 40 can have quenching type additives as known in the art. The charge on the other plate (sphere 60 connected to conductors 42) remains. If capacitor 70 (2-terminal capacitor array) had a capacity of 10 microfarads (which can be attained by using a sufficient number of the tubes 34-42) and was charged up to 10,000 volts, the charge would be 1/10 Coulom (Q equals CV). If the capacity of the sphere 60 was, for example 100 pF (picofarads), the potential which is generated is momentarily about 100 million volts.

It is thus seen that the invention furnishes solutions to various problems as mentioned above, and at reasonable cost of equipment and power supply.

Although the invention has been described in specific terms, it will be apparent to those skilled in the art that there are many modifications, changes and improvements which may be made therein without departing from the spirit and scope of the invention as herein claimed. Further, if desired, the switching arrangements at 76, 77, 80 and 81 of FIG. 7 may be mounted inside the sphere 60, if convenient.

Gregory HODOWANEC

Rhysmonic Cosmology

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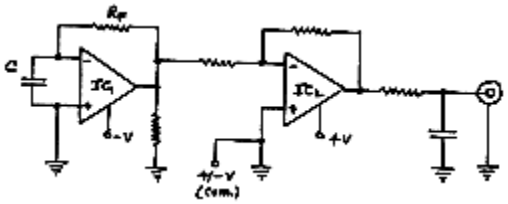

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Alfred M. HUBBARD

Coil Generator

***Seattle Post-Intelligencer* (July 29, 1920)**
***Seattle Post-Intelligencer* (Feb. 26, 1928)**
"The Hubbard Energy Transformer" by Gaston Burridge (*Fate Magazine*, July, 1956, pp. 36-42)
US Patent # 1,723,422: Internal Combustion Engine Spark Plug
Notes by George Van Tassel
Notes
Who Was Alfred M. Hubbard?

Photo which appeared in the Seattle "Post-Intelligencer" in 1919 shows Alfred M. Hubbard dem laboratory.

The Post-Intelligencer **(Seattle WA), Thursday, July 29, 1920 ~**

Hubbard Coil Runs Boat On Portage Bay Ten Knots An Hour; Auto Test Next

Seattle Boy Inventor Makes Good His Claims of Last December When He Announced Discovery to P.I.

Hubbard's Claims

If young Hubbard's claims are correct regarding the newest coil he has perfected, and which propelled a boat yesterday, these are a few of the things the coil would do without cost other than the initial outlay of $90:

Drive a large touring car at normal speed.
Illuminate a moderate-sized office building.
Furnish current for lighting, cooking, and heating for a large residence
Heat seven two room apartments.

Alfred M. Hubbard, Seattle boy inventor of a device which for want of a better name he terms an atmospheric power generator, yesterday made good his prediction that he would drive a motorboat with the apparatus as a source of
power.

An eighteen foot boat, propelled by a thirty-five-horse power electric motor, which obtained its current from the Hubbard coil, was driven about Portage Bay on Lake Union. Among those who witnessed the demonstration was a well-known local capitalist, the inventor's father,William H. Hubbard, and a Post Intelligencer reporter.

The boat traveled at a speed of between eight and ten knots--silently, except for the whirring of a chain belt which connected the motor with the propeller shaft. When the chain belt was removed, the motor ran free at a speed estimated at 3,500 revolutions [the rest of this line is unreadable]

No Hidden Wires Found

To guard against the possibility of ordinary storage batteries concealed about the boat as a power source, instead of the Hubbard coil, both electric motor and coil were lifted free from their blocks, but no hidden wiring was revealed. The coil used as a power unit was eleven inches in diameter and fourteen inches in length. According to Hubbard, tests of the coil show a current of 280 amperes and 125 volts, which, he pointed out was equivalent to approximately forty-five horse power, or sufficient to drive an automobile. The current is pulsating.

The electric motor was approximately twelve inches in diameter eighteen inches in length. It had been reconstructed in order to be used with the Hubbard coil.

After his ride in the strange powered craft the capitalist declared that he was frankly puzzled, but that he desired an electrical engineer in his employ to make an examination of the coil before he felt free to discuss it.

Since last December, when the Post-Intelligencer first made public the claims of the youthful inventor, he has been more or less in retirement, perfecting his coil. He took up his residence in Everett where, with the assistance of Everett backers he worked on his device.

A local capitalist agreed to witness a demonstration of the coil to determine its practicability as a power source. The motorboat was fitted with blocks on which to rest the motor and the propeller shaft geared for a chained belt.

When the motor was first tried out after its installation in the boat it ran backwards. So involved are the connections between the motor and the coil that fully a half-hour's experimentation was necessary before the motor shaft revolved in the right direction.

That the capitalist was frankly skeptical of the device was plain when he,with two other passengers, boarded the boat at the Seattle Yacht Club wharf. All the machinery that was visible was the coil and the motor, the latter plainly geared to the propeller shaft. The boat shoved off, Hubbard threw the switch, and instantly the boat began to pick up speed.

It circled about the bay and returned to the wharf, with never a slackening of speed. The wires connecting coil and motor had begun to heat under the excessive current, and, fearing that some part of the coil might give way under the extra heavy strain put on it, Hubbard declined to permit the motor to be run continuously for any length of time. It was tried out later several times, after brief periods which allowed the wires to cool, and its power apparently showed no diminution. No instruments were used to test its wattage.

The capitalist admitted that the demonstration intrigued his interest, but that he would wait for his expert's opinion before discussing it.

Following the demonstration, the young inventor declared that within a few days he expected to drive an automobile with the coil as a power unit.

The Coil used yesterday had been built especially for the demonstration, and is nearly twice the size of the coil Hubbard used in his demonstration last winter. The large coil cost approximately $90 to construct. The inventor says that so far as he has been able to learn its life as a power unit is indefinite. He declared that a coil large enough to drive an airplane would be no more than three times the size of the coil used yesterday, and that a machine thus equipped could fly around the world without stopping, so far as the power supply is concerned.

While the device has been patented, the claims for it are so broad that Hubbard says he does not feel safe in making public his secret. In general, he says, it is made up of a group of eight electro-magnets, each with primary and secondary windings of copper wire, which are arranged around a large steel core. The core likewise has a single winding. A coil thus constructed, he says, is lifeless until given an initial impulse. This is done by connecting the ends of its windings for a fraction of a second to an ordinary[two words unreadable R.L.R.] -ing circuit, he says.

The manner of this momentary charging, however, constitutes the principal secret of the device, according to the inventor, who says that while machinists have built a number of coils for him

under his direction, they have been unable to "start" them. In the event the power of the coil should diminish, it can be rejuvenated in less than a second, Hubbard says.

Photo captions (Photos by Walter P. Miller, *Post-Intelligencer* Staff Photographer)

1-- Arrangement of Hubbard coil and motor in boat. The motor is nearest the bow.
2-- Alfred M. Hubbard, inventor of the coil used as a power unit.
3--The boat under way, driven by a motor which obtained its power from the Hubbard coil.

Seattle Post Intelligencer **(February 26, 1928)**

Hubbard Believes Mystery Motor Based On His Own Invention

Ex-Dry Agent says he worked out secret of utilizing radium power in 1919

by

R.B.Bermann

Alfred M. Hubbard, the youthful stormy petrel of the Seattle branch of the federal prohibition office, may possibly be the discoverer of at least the basic principle behind the [Hendershot] "fuelless motor" which was demonstrated for the first time in Detroit last week, and which is attracting the attention of such aeronautical experts as Col. Charles A. Lindbergh and Maj. Thomas G. Lanphier.

This was claimed by Hubbard himself yesterday. While he said that he has been able to learn none of the details in connection with the Detroit demonstration, he declared that he was inclined to suspect very strongly that the motor was simply a development of the apparatus which e himself demonstrated in Seattle as early as 1919.

Driven By Radium

In 1919 Hubbard represented the apparatus as being capable of extracting electrical energy directly from the air, but he admitted yesterday that this had been merely a subterfuge to protect his patent rights, and that, as a matter of fact, it had been a device for extracting electrical energy from radium, by means of a series of transformers which stepped up the rays.

He declined to go into detail in regard to the exact manner in which he managed to extract power from radium -- but said that, so far as he had been able to determine, there was no great difference between the Detroit machine and his.

"I never heard of this Lester J. Hendershot, the Pittsburgh electrical engineer who is demonstrating the motor", Hubbard said, "but it must be remembered that I worked on the invention for two years in Pittsburgh -- in 1921 and 1922. It was a Dr. Greenslade who

represented the people who were financing me at the time -- but, of course, if the people who bought out most of my interest in the invention were to bring it out as their own machinery, they would probably do it through a man with whom I had never worked. I was employed by the radium Chemical Company at the time I was working in Pitsburgh".

Sold Interest

While Hubbard declined to disclose the exact amount that he had received for his invention, he made it clear that he had sold out a 75% interest in what may prove to be the greatest scientific revelation of the ages for little more than a mess of potage.

"When I made my discovery", he said, "I was only 16 years old and, until that time, I'd never even had an ice cream soda. So you can imagine that a couple of thousand dollars looked mighty big to me. I never hesitated for an instant when the people who were financing me insisted on taking a [missing text] kept demanding more and more of my rights.

Just Quit Cold

"But, at last, along in 1922, I suddenly came to the realization that if I acceded to their latest demand I'd have only 20% interest left, so I just quit them cold".

Hubbard asserted that he has no intention of bringing any legal action against Hendershot or his associates for the present, at least.

"If he really is using my idea", Hubbard said, "and if it proves practical, it's so big that 25% -- or 2% -- will bring in more money than I can ever possibly use. So I am not worried ... [missing text] when he went to work for the Pittsburgh people.

Hubbard went into retirement along with his motor for some time, but he made a dramatic return to Seattle and public attention a few years ago, when he was indicted for liquor conspiracy with Roy Olmstead, then acclaimed as the bootleg king of the Northwest.

Hubbard was duly arrested but, on the eve of his trial, the indictment against him was dismissed and it later came out that, while associated with Olmstead, he had turned government informer. Some time after this he came out in the open as a frankly avowed prohibition agent.

R&D Notes on the Hubbard Coil by George Van Tassel

College of Universal Wisdom (Yucca Flats, CA) ~ Unidentified article

In 1952, in a paper entitled "The World of the Secret Forces", a group of Austrian scientists disclosed the segmented energy pattern f the surface of the Earth. Their research was carried on at 48° N Latitude.

The segmented checkerboard pattern of positive and negative squares on the surface of the Earth, at the magnetic equator, was about 32 meters on each side and becomes zero at both magnetic poles. At the 48° N Latitude the squares were 15.9 meters. They also discovered that the Cheops Pyramid in Egypt is about 30° N Latitude and the diagonal of the pyramid magnetic field was circa 30 meters.

It is amazing that they discovered each of the squares had positive and negative poles in their centers, and that these poles conform to "Hubbard's Energy Generator" in 1919, Cater's Energy Generator in 1971, and the Chinese "Cosmic Flower", the source of all energy.

The poles in these checkerboard squares are 2.45 meters diameter in the center pole and the eight surrounding poles are 60 cm diameter at 48° N Latitude. We are convinced that Hubbard tapped the energy from these Earth surface poles in Seattle, Washington in 1919.

Alfred M. Hubbard was front page news on December 17, 1919, in the Seattle Post-Intelligencer newspaper. Hubbard was only 19 years old when he powered an 18-foot boat around Portage Bay with a 35-horsepower electric motor hooked to his energy generator, which was only 11 inches in diameter and 14 inches long. There were no batteries in the boat and the boat ran for hours beyond the life of batteries.

Hubbard's generator was a central coil wound on a tube, with eight coils around it, wound on iron cores. Here is real power without smog, or fumes and at no cost to operate. This explains why the "authorities" stepped in and stopped the experiments as in other cases through the years.

A Finnish citizen, who worked with Hubbard, gave some additional data to Art Aho, and we have the original tubes that were part of Hubbard's equipment.

Hubbard ran wires North, South East and West, 1200 feet in each direction from his coil generator in the center. These wires passed over 18 of the Earth's square poles in each direction and ended connected to a steel tube with some mercury in it, in the center of the 19th pole in each direction. The alternate polarity, from each pole crossed, perpendicular to the wire created a wave pattern from one end of the wire to the center coil assembly creating a pulse of electrical energy. This fixed generator transmitted a resonant energy to the generator in the boat.

Can you picture these "no maintenance, no cost" devices, set up around cities, supplying power to the present circuits, with no radiation from reactors, no smoke from steam-plant generators, and no danger from dams that break and change the ecology around rivers. This is the power principle hidden by "authority" since 1919 that has made the cost of electricity what it is now, from expensive maintenance-hungry sources.

We hope we can set up a separate research on this principle when we finish the "Integratron".

Notes

According to G.D.Mutch, the dimensions in the table of Table 1 are taken from Hubbards actual 9-coil design:

Table 1

Hubbard Design	Outer	Inner	Total	Hubbards Frequencies
No. Coils	8	1	9	5.340 Hz = 2.8 Ghz/ (2^19)
Diameter mm	30	49		10.681 Hz =€ 2.8 Ghz/ (2^18)
Height mm	146	146		21.362 Hz = 2.8 Ghz/ (2^17)

"Hubbard used a multiply ratio of 5.75 formulated from his knowledge of the Golden Section. Example 49/30 = 1.6333. Hubbard stated that his nine(9) coil design above stepped up the output power compared to the input power by a ratio of 3:1... Hubbard stated he could use copper wire of different diameter/gauges to complete one totally wound coil.

The Hubbard Energy Transformer

by **Gaston Burridge.**

Fate Magazine, July, 1956, pp. 36-42

The mysterious device was said to radioactive rays into electricity - and run big motors.

Recently I spent an evening with a scientist close to atomic energy developments, and to be perfectly frank I guided the conversation to the subject of changing radioactive ways directly into useable electrical energy. I was told it has not been done. That atomic scientists have tried every thing they can think of to accomplish this neat little trick, but so far have failed. Many an atomic researcher has believed such an arrangement possible, but the right combination has not been found.

I mentioned that I had heard of a young man named Albert Hubbard who in 1919 was credited with having accomplished something approaching this.

My atomic scientist acquaintance was immediately interested.

The conversation changed from me asking all the questions to him asking most of them.

What will become of it? Who knows! Ever since mankind invented the wheel he has been searching for a means to keep his wheel turning - indefinitely and at small costs "perpetual motion machines are seldom invented these days".

Perpetual motion seemingly has become the impossible.

A few men have- or think they have seen the way to untapped power sources.

Alfred Hubbard seems to be on of these, around him and his device as around other such men and devices a mystery has been spun.

I choose to call the Hubbard device a transformer because it appears to transform and turn one sort of energy into another. The apparatus is now more than 35 years old .

Alfred M. Hubbard is still alive. He is a man in his late 50's.He does not live in this country.

He continues to be secretive about his efforts, but it is known that he is still interested in atomic energy materials. There are many rumors afloat. Alfred M. Hubbard was a Seattle, Washington boy.

He was only sixteen when he began work on his device and only nineteen when he perfected it to a demonstrable machine.

Hubbard's announcement of his transformer set Seattle a buzzing. On Wednesday December 17 1919 the *Post Intelligencer* carried a first page spread entitled "Hubbards New Energy Device No Fake" says Seattle college man. That college man was Rev. Father William E. Smith professor of physics at Seattle College, a Catholic institution. Professor Smith was quoted as stating he had examined the Hubbard Device carefully and had tested it as fully as his means would allow.

Father Smith said, "I unhesitatingly say that Hubbards Invention is destined to take the place of existing power generators and that within a few years it will have advanced the whole theory and practice of electricity beyond the dreams of present day scientists."

But it hasn't! Why hasn't it? Atomic energy recently has become the power of electricity, but it is used to heat water, to make stream, which turns a turbine, which turns a most conventional generator.

This is a long way from converting atomic energy or radioactive energy directly into electricity as the Hubbard Device was reported to do.

There are rumours that there are several other devices similar to Hubbard's.

Rumour says that devices reached a most interesting point of development and the "Authorities" stepped in and stopped the experiments and in some cases confiscated the apparatus.

This under the guise of "improper and dangerous use of atomic energy ". Dangerous to whom?

Electricity as we know is generally is derived from two accepted means

By cutting the lines of magnetic force set up in coils of wire carrying an electric current to produce strong magnetic fields.

By reactive chemical means which requires chemicals to be burned reacted upon and destroyed and thus frequently replaced as in wet and dry batteries.

Recently another device has been developed which will manufacturer electricity directly from sunlight. As yet this device has a small output and is no threat to present generators.

Hubbard's transformer uses none of these. It appears not to be within the laws of conservation of energy. At first Hubbard claimed he was getting his energy from out of the air. Father Smith soon put an end to that.

He did agree however the inventor had stumbled upon something new. The word stumbled which seems to disregard Hubbard's three years of work. Professor Smith declined to reveal anything regarding the construction of the device.

He did say its energy output was a steady and that it produced an alternating current. It's frequency or charge was not mentioned. It's voltage and amp limits were not given.

Photographs published in the *Intelligence* indicated that the apparatus or at lest one of them operated a light bulb of about 900 watts capacity. The picture shows this lamp brightly aglow.

The lamp was atop a small device of which could have been held in two hands. In this case the cycle would be relatively unimportant but the voltage would be have to be within rather close limits. The amperage required could be slight.

Father Smith said, " I hardly think this apparatus will operate indefinitely though I could not place a maximum length of operation at this time."

He said he believed the apparatus constructed " would continue to function for an unheard of period and he was of the opinion it could be easily rejuvenated after a long use."

Professor Smith also said he did not think that there was any limit to the size such a device might be built nor a limit to its output capacities.

One of the interesting experiments made with the Hubbard transformer was the propelling of a 18 feet boat around the Portage Bay near Seattle.

A 35 horse power electric motor was hooked up to a Hubbard transformer measuring maybe 12-14 inches in diameter and 14 inches in length. It furnished enough energy to drive the boat and a pilot at a good clip around the bay.

The demonstration lasted several hours and created a sensation. The test required enough current for a long enough time to rule out any sort of battery, being housed in the device. Even a battery of such strength and durability would certainly be something new.

From this test we may make some surmises. The cycle was probably 50 or 60 cycles per second.

There are 25 cycle motors but they are a few and probably the boats motor was not rewound to take either higher or lower frequency commercial electricity in US is 60 cycles.

The voltage could be 440 or 220 volts, probably 220 volts. It seems unlikely a 35 horsepower motor would have as a low voltage of 110 volts.

It is possible of course or it could have been rewound for a higher voltage 600 volts or 1,000 volts.

Ampere or quality of current would have to be considerably less at higher voltage input greater at a lower voltage input.

If the horsepower was to be maintained anywhere near that recorded. Thus we can suppose the Hubbard Transformer was no baby.

Soon after the demonstration, Hubbard's name dropped from the Seattle paper and he went to work for the Radium Chemical Company of Pittsburgh -- now of New York.

But on Monday, February 27, 1928 Hubbard and his transformer again made Seattle's *Post Intelligencer* headline. This time in connection with the "Fuelless Motor" designed and built by Lester J. Hendershot, then of Selfridge Field Detriot.

In an interview with R.B. Berman at this time, Hubbard revealed for the first time that his transformer was powered with radioactive substances.

Hubbard admitted he had used the idea of power from the air to protect his real idea for patent and that this machine created electrical energy directly from rays of force or particles emitted from radioactive materials.

He did not name the materials. They remain a secret today. According to Hubbard's statement in the newspaper he sold a 50% interest in his device to the Radium Chemical Company and went to Pittsburgh to continue developing the device for them.

Hubbard related that the company had demanded more and more equity in the machine until finally he retained only a 25% interest. Evidently pressure was bought upon him to sign over an additional 5%.

This Hubbard refused to do, and in 1922 he severed connection with Radium Chemical Company and returned to Seattle.

At the present time Hubbard is not inclined to discuss his employment period with the Radium Chemical Company nor will he discuss this device or his experiences with it.

My first letter to the Radium Chemical Company was not answered. A second letter a few months later brought a reply from Mr. Grange Taylor, vice president of the concern.

He stated that none of the employees presently with the company and also with it in the early 1920's could remember anything about the device or about Hubbard himself. Mr. Taylor letter said "there is no information available on the device you mention."

A poor description of the device may be better than none at all.

Around a hollow centred probably a non-magnetic tube insulated copper wire is wrapped. The size of the wire and the number of turns are not known.

This winding could correspond to the primary of a transformer.

In the hollow of this tube are a series of small diameter preferably magnetic iron rods. The radioactive materials are packed snugly about these rods to form a compact mass.

These bars do not touch one another. If they are magnetic their poles might be all alike or they may be alternated.

Circulating the central tube and its appendages are eight coils of wire wound upon what appears to be eight cores of magnetic upon iron. These eight coils stand parallel to the central tube. Their outer windings appear to be connected in series and probably form something corresponding to the secondary of the transformer.

As there seems to be more windings on this secondary than the primary one would suspect following ordinary electrical practice. That the transformer was a step up variety rather than a step down.

That is the secondary voltage would be higher than its primary voltage and consequently its amperage would be less.

Four leads out wires are showing. How they are connected together -- if they are remains a secret.

Around the outside of the windings appears to be a wrapping of some dense material, probably meant to shield or turn aside the rays from the radio active materials within. Such a shield would be necessary so to protect those working with the apparatus.

All of this is set between the roll ends that make the device look like a giant spool.

There are no moving parts. The machine operates silently. The radioactive materials probably would have to be replaced from time to time.

Whether the coils have to be excited once before the device will operate, I don't know. It may be they have to excite each time the machine is started to establish the directional flow of the current.

If Father Smith made any records of his findings in connection with Hubbard's transformer, they are not available at present.

Recent inquiry at the college disclosed that Professor Smith has passed away and the college library contains no notes covering this matter.

As far as can be determined no US patents ever were issued to Hubbard's covering the device.

The Radium Chemical Company list of patents is long but no title in their list appears to cover such an apparatus as Hubbard's.

Either the device was not developed to a point where a patent could be obtained or because of seeming friction which developed between the company and Hubbard it was impossible for either to obtain a patent.

It was possible that patents exist in other countries.

US Patent # 1,723,422
Internal Combustion Engine Spark Plug

(August 6, 1929)

Alfred M. Hubbard
Assignor to Radium Spark Plug Corporation

My invention relates to the art of spark plugs. More particularly, my invention relates to a spark plug the terminals of which, that are disposed within the cylinder of an internal combustion engine, are provided with radium for ionizing the space between said terminals.

While I will describe my invention as applied to spark plugs for use in internal combustion engines, nevertheless, it is to be expressly understood that my invention is not to be construed as limited to such specific application, but is applicable to all uses where like conditions and like problems obtain.

Spark plugs, as heretofore designed for use in automobiles, are provided with a gap between the terminals of approximately one-thirty-second of an inch (1/32"). The aim of automobile engineers is to provide as great a gap as possible, in order to provide as prolonged an exposure of the fuel to the ignition spark as possible. However, the length of this exposure to the ignition means is definitely limited by the factors obtaining in the timing mechanism. If too large an amperage is employed, the breaker points in the timing mechanism are burned off. Therefore, it has been found that a compromise in the time during which the fuel may be exposed to the ignition spark and the ability of said breaker points to support the current is necessary, and, as a result, the gap between the terminals of the ordinary spark plug, as used in automobile engines, has been established as about 1-32nd of an inch. A primary object of my invention is to extend the period of exposure of the fuel to the ignition spark, and at the same time take into due

consideration the weakness or limitations imposed by the breaker points of the timing mechanism.

A further difficulty that obtains in the ignition of fuel in internal combustion engines, by means of spark plugs of present practice design, resides in the fact that while under compression the spaced relation is limited to about 1-32nd of an inch., the same spark would jump a gap of some ten times the said space when exposed to pressures no greater than atmospheric pressure. In other words, it seems that subjecting the fuel gases to compression, as obtains in the ordinary internal combustion engine as used in automobiles, greatly reduces the space that may be provided between the terminals. That is, in the ordinary internal combustion engine, the necessity of compressing the fuel gases militates against providing the best condition for providing the ignition spark with spark plugs of ordinary practice design; that is, the said compression militates against providing a spark which will ignite any other than the more volatile parts of the fuel. A primary object of my invention is to provide a spark plug which overcomes this objection.

A further primary object of my invention is to provide a spark plug which will reduce the period of combustion of the fuel charge of the internal combustion engine, by providing an ignition means of a higher degree of heat.

The above-mentioned general objects of my invention, together with others inherent in the same, are attained by the device illustrated in the following drawings, the same being merely preferred exemplary forms of embodiment of my invention, throughout which drawings lie reference numerals indicate like parts:

Figure 1 is a preferred form, in side elevation, of a spark plug embodying my invention, having its terminals provided with radioactive matters;

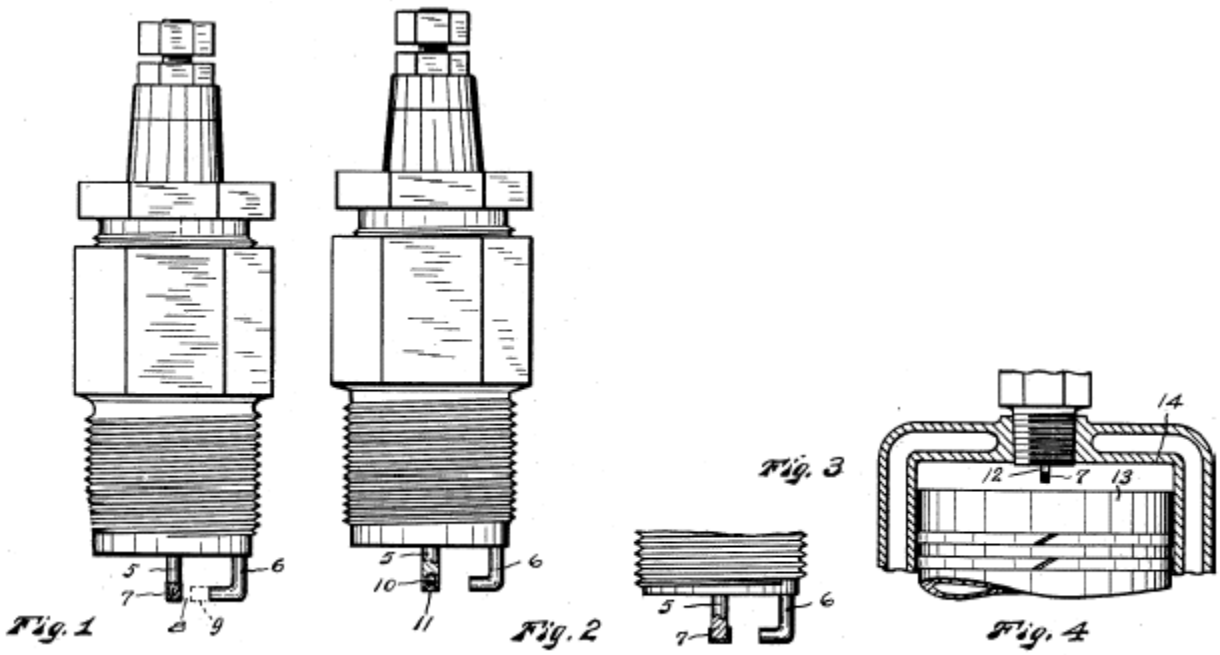

Figure 2 is a view of such a spark plug, having the radioactive matter disposed in a pocket within the end portion of the terminals;

Figure 3 is a fragmentary view of such a spark plug having the radioactive matter applied to the end portions of the terminals; and

Figure 4 is a view of still another modified form embodying my invention, where the spark plug has but one terminal and the engine piston constitutes the other terminal for the ignition means.

In constructing a spark plug embodying my invention, preferably one or both of the terminals 5 and 6 are provided with radioactive matter 7 such as, for example, radium zinc sulphite. Preferably, one terminal 5, which is the positive terminal, is provided with said radioactive matter. These terminals, it will be noted, are in spaced relation, -- the space 8 is provided between the same. The dotted lone 9 indicates the relative position of the terminal of the present practice design of spark plug for use in automobile internal combustion engines. The radioactive matter is disposed throughout the material constituting the terminal in the preferred form shown in Figure 1.

The providing of such a terminal may be accomplished by heating the material constituting the said terminal to a very high degree of temperature in an electric furnace, and then when the molecules of said terminal material are in expanded form, the same may be dipped in radioactive matter, thereby impregnating the terminal substance with the radioactive matter.

In Figure 2, the terminal may be provided with pocket 10, and this pocket supplied with radioactive matter. Then the said pocket may be closed by suitable plugging material 11.

In the modified form shown in Figure 3, the radioactive matter is applied to the end portions of the terminal by coating the same with material containing radioactive matter 7.

In the modified form shown in Figure 3, the radioactive matter is applied to the end portions of the terminal by coating the same with material containing radioactive matter 7.

In the modified form shown in Figure 4, a spark plug having but one terminal 12, which is the positive terminal, may be provided with radioactive matter, and the piston 13 itself in cylinder 14 may be employed to constitute the negative terminal. The use of the piston for such a purpose is rendered possible owing to the fact that the space between the terminals may be greatly increased as compared to the present practice design of spark plug, so that the spark may be caused to pass from the terminal 12 to the piston 13, when the said piston is at its topmost position, or as it approaches its topmost position.

The mode of operation of a spark plug embodying my invention is as follows. The radioactive matter provided on one or both of the terminals of the spark plug facilitates the current passing between said terminals by ionizing the space therebetween. Hence, instead of the short interval of 1/32" which normally obtains between the terminals of spark plugs used in automobile internal combustion engines, I provide a much greater space. Said space may be 1/4" or more. My experiments and use of the spark plug so constructed have proven that the spark thus

provided is of much greater degree of brightness, and is characterized by a much greater degree of heat. Thus, I provide for a much longer exposure of the fuel to the ignition spark, so that parts of said fuel, which are of less volatility that others, may be ignited by the spark, owing to its high degree of heat, as well as the heat developed by the burning of the more volatile parts of the fuel charge. This results in providing for a more complete combustion of the fuel in a much briefer period of time than has heretofore been possible, and also the more nearly complete elimination of all the unburnt fuel left in the cylinder.

By providing for the more complete combustion, I also provide for the reduction of carbon, which results from imperfect combustion, and which is very objectionable in that it dilutes the lubricating qualities of the oil in the crank casing.

Furthermore, a distinct advantage is noted in that a leaner fuel mixture may be employed.

To secure the same amount of power due to the more complete combustion provided by my invention. In other words, an advantage results by reason of my invention in the economizing of fuel. My experiments have shown that an engine, which may be very slow to start with spark plugs as heretofore designed, operates forthwith when provided with spark plugs embodying my invention, i.e., it is not necessary to "heat up" before the engine is able to move the car.

The same principles hereinabove set forth, as respects the spark plug embodying my invention, applies to the other modified forms illustrated.

The modified form shown in Figure 4 manifestly overcomes any difficulty of the carbon collecting between the terminals, not only by the elimination of one of the terminals in the form of a small terminal wire, but the comlpeteness of the combustion reduces the amount of carbon which is developed. The necessity of providing a carefully adjusted space interval is not requisite when the said interval is ionized, and, therefore, the care and attention now required to maintain said space is eliminated.

Obviously, changes may be made in the forms, dimensions, an arrangement of the parts of my invention, without departing from the principle thereof, the above setting forth only preferred forms of embodiment.

Who Was Alfred M. Hubbard?

by **Todd Fahey**

Before Sergeant Pepper's Lonely Hearts Club Band...before Timothy Leary...before Ken Kesey's band of Merry Pranksters and their Electric Kool-Aid Acid Tests...before the dawn of the Grateful Dead, there was Alfred M. Hubbard: the Original Captain Trips.

You will not read about him in the history books. He left no diary, nor chatty relatives to memorialize him in print. And if a cadre of associates had not recently agreed to open its files,

Captain Alfred M. Hubbard might exist in death as he did in life--a man of mirrors and shadows, revealing himself to even his closest friends only on a need-to-know basis.

They called him "the Johnny Appleseed of LSD." He was to the psychedelic movement nothing less than the membrane through which all passed to enter into the Mysteries. Beverly Hills psychiatrist Oscar Janiger once said of Hubbard, "We waited for him like a little old lady for the Sears-Roebuck catalog." Waited for him to unlock his ever-present leather satchel loaded with pharmaceutically-pure psilocybin, mescaline or his personal favorite, Sandoz LSD-25. Those who will talk about Al Hubbard are few. Oscar Janiger told this writer that "nothing of substance has been written about Al Hubbard, and probably nothing ever should."

He is treated like a demigod by some, as a lunatic uncle by others. But nobody is ambivalent about the Captain: He was as brilliant as the noonday sun, mysterious as the rarest virus, and friendly like a golden retriever.

The first visage of Hubbard was beheld by Dr. Humphry Osmond, now senior psychiatrist at Alabama's Bryce Hospital. He and Dr. John Smythies were researching the correlation between schizophrenia and the hallucinogens mescaline and adrenochrome at Weyburn Hospital in Saskatchewan, Canada, when an A.M. Hubbard requested the pleasure of Osmond's company for lunch at the swank Vancouver Yacht Club. Dr. Osmond later recalled, "It was a very dignified place, and I was rather awed by it. [Hubbard] was a powerfully-built man...with a broad face and a firm hand-grip. He was also very genial, an excellent host."

Captain Hubbard was interested in obtaining some mescaline, and, as it was still legal, Dr. Osmond supplied him with some. "He was interested in all sorts of odd things," Osmond laughs. Among Hubbard's passions was motion. His identity as "captain" came from his master of sea vessels certification and a stint in the US Merchant Marine.

At the time of their meeting in 1953, Al Hubbard owned secluded Daymen Island off the coast of Vancouver--a former Indian colony surrounded by a huge wall of oyster shells. To access his 24-acre estate, Hubbard built a hangar for his aircraft and a slip for his yacht from a fallen redwood. But it was the inner voyage that drove the Captain until his death in 1982. Fueled by psychedelics, he set sail and rode the great wave as a neuronaut, with only the white noise in his ears and a fever in his brain.

His head shorn to a crew and wearing a paramilitary uniform with a holstered long-barrel Colt .45, Captain Al Hubbard showed up one day in '63 on the doorstep of a young Harvard psychologist named Timothy Leary.

"He blew in with that uniform...laying down the most incredible atmosphere of mystery and flamboyance, and really impressive bullshit!" Leary recalls. "He was pissed off. His Rolls Royce had broken down on the freeway, so he went to a pay phone and called the company in London. That's what kind of guy he was. He started name-dropping like you wouldn't believe...claimed he was friends with the Pope."

Did Leary believe him?

"Well, yeah, no question."

The captain had come bearing gifts of LSD, which he wanted to swap for psilocybin, the synthetic magic mushroom produced by Switzerland's Sandoz Laboratories. "The thing that impressed me," Leary remembers, "is on one hand he looked like a carpetbagger con man, and on the other he had these most-impressive people in the world on his lap, basically backing him."

Among Hubbard's heavyweight cheerleaders was Aldous Huxley, author of the sardonic novel Brave New World. Huxley had been turned on to mescaline by Osmond in '53, an experience that spawned the seminal psychedelic handbook The Doors of Perception. Huxley became an unabashed sponsor for the chemicals then known as "psychotomimetic"--literally, "madness mimicking."

But neither Huxley nor Hubbard nor Osmond experienced madness, and Dr. Osmond wrote a rhyme to Huxley one day in the early 1950s, coining a new word for the English language, and a credo for the next generation:

To fathom hell or soar angelic, just take a pinch of psychedelic
Those who knew Al Hubbard would describe him as just a "barefoot boy from Kentucky," who never got past third grade. But as a young man, the shoeless hillbilly was purportedly visited by a pair of angels, who told him to build something. He had absolutely no training, "but he had these visions, and he learned to trust them early on," says Willis Harman, director of the Institute of Noetic Sciences in Sausalito, CA.

In 1919, guided by other-worldly forces, Hubbard invented the Hubbard Energy Transformer, a radioactive battery that could not be explained by the technology of the day. The Seattle Post-Intelligencer reported that Hubbard's invention, hidden in an 11" x 14" box, had powered a ferry-sized vessel around Seattle's Portico Bay nonstop for three days. Fifty percent rights to the patent were eventually bought by the Radium Corporation of Pittsburgh for $75,000, and nothing more was heard of the Hubbard Energy Transformer.

Hubbard stifled his talents briefly as an engineer in the early 1920s, but an unquenchable streak of mischief burned in the boy inventor. Vancouver magazine's Ben Metcalfe reports that Hubbard soon took a job as a Seattle taxi driver during Prohibition. With a sophisticated ship-to-shore communications system hidden in the trunk of his cab, Hubbard helped rum-runners to successfully ferry booze past the US and Canadian Coast Guards. He was, however, caught by the FBI and went to prison for 18 months.

After his release, Hubbard's natural talent for electronic communications attracted scouts from Allen Dulles's Office of Strategic Services (OSS). Also according to Metcalfe, Hubbard was at least peripherally involved in the Manhattan Project.

The captain was pardoned of any and all wrongdoing by Harry S. Truman under Presidential Pardon #2676, and subsequently became agent Captain Al Hubbard of the OSS. As a maritime specialist, Hubbard was enjoined to ship heavy armaments from San Diego to Canada at night, without lights, in the waning hours of World War II--an operations of dubious legality, which

had him facing a Congressional investigation. To escape federal indictment, Hubbard moved to Vancouver and became a Canadian citizen. Parlaying connections and cash, Hubbard founded Marine Manufacturing, a Vancouver charter-boat concern, and in his early 40s realized his lifelong ambition of becoming a millionaire. By 1950 he was scientific director of the Uranium Corporation of Vancouver, owned his own fleet of aircraft, a 100-foot yacht, and a Canadian island. And he was miserable.

"Al was desperately searching for meaning in his life," says Willis Harman. Seeking enlightenment, Hubbard returned to an area near Spokane, WA, where he'd spent summers during his youth. He hiked into the woods and an angel purportedly appeared to him in a clearing. "She told Al that something tremendously important to the future of mankind would be coming soon, and that he could play a role in it if he wanted to," says Harman. "But he hadn't the faintest clue what he was supposed to be looking for."

In 1951, reading a scientific journal, Hubbard stumbled across an article about the behavior of rats given LSD. "He knew that was it," says Harman. Hubbard went and found the person conduction the experiment, and came back with some LSD for himself. After his very first acid experience, he became a True Believer.

"Hubbard discovered psychedelics as a boon and a sacrament," recalls Leary.

A 1968 resume states that Hubbard was at various times employed by the Canadian Special Services, the US Justice Department and, ironically, what is now the Bureau of Alcohol, Tobacco and Firearms. Whether he was part of the CIA mind-control project known as MK-ULTRA, might never be known: all paperwork generated in connection with that diabolical experiment was destroyed in '73 by MK-ULTRA chief Dr. Sidney Gottlieb, on orders from then-CIA Director Richard Helms, citing a "paper crisis."

Under the auspices of MK-ULTRA the CIA regularly dosed its agents and associates with powerful hallucinogens as a preemptive measure against the Soviets' own alleged chemical technology, often with disastrous results. The secret project would see at least two deaths: tennis pro Harold Blauer died after a massive injection of MDA; and the army's own Frank Olson, a biological-warfare specialist, crashed through a closed window in the 12th floor of New York's Statler Hotel, after drinking cognac laced with LSD during a CIA symposium. Dr. Osmond doubts that Hubbard would have been associated with such a project "not particularly on humanitarian grounds, but on the grounds that it was bad technique."

But Hubbard's secret connections did allow him to expose over 6,000 people to LSD before it was effectively banned in '66. He shared the sacrament with a prominent Monsignor of the Catholic Church in North America, explored the roots of alcoholism with AA founder Bill Wilson, and stormed the pearly gates with Aldus Huxley (in a session that resulted in the psychedelic tome Heaven and Hell).

Laura Huxley met Captain Hubbard for the first time at her and her husband's Hollywood Hills home in the early 1960s. "He showed up for lunch one afternoon, and he brought with him a portable tank filled with a gas of some kind. He offered some to us," she recalls, "but we said we

didn't care for any, so he put it down and we all had lunch. He went into the bathroom with the tank after lunch, and breathed into it for about ten seconds. It must have been very concentrated, because he came out revitalized and very jubilant, talking about a vision he had seen of the Virgin Mary."

"I was convinced that he was the man to bring LSD to planet Earth," remarks, Myron Stolaroff, who was assistant to the president of long-range planning at Ampex Corporation when he met the captain. Stolaroff learned of Hubbard through philosopher Gerald Heard, a friend and spiritual mentor to Huxley. "Gerald had reached tremendous levels of contemplative prayer, and I didn't know what in the world he was doing fooling around with drugs."

Heard had written a letter to Stolaroff, describing the beauty of his psychedelic experience with Al Hubbard. "That letter would be priceless -- but Hubbard, I'm sure, arranged to have it stolen.... He was a sonofabitch: God and the Devil, both there in full force."

Stolaroff was so moved by Heard's letter that, in '56, he agreed to take LSD with Hubbard in Vancouver. "After that first LSD experience, I said 'this is the greatest discovery man has ever made.'"

He was not alone.

Through his interest in aircraft, Hubbard had become friends with a prominent Canadian businessman. The businessman eventually found himself taking LSD with Hubbard and, after coming down, told Hubbard never to worry about money again: He had seen the future, and Al Hubbard was its Acid Messiah.

Hubbard abandoned his uranium empire and, for the next decade, traveled the globe as a psychedelic missionary. "Al's dream was to open up a worldwide chain of clinics as training grounds for other LSD researchers," says Stolaroff. His first pilgrimage was to Switzerland, home of Sandoz Laboratories, producers of both Delysid (trade name for LSD) and psilocybin. He procured a gram of LSD (roughly 10,000 doses) and set up shop in a safe-deposit vault in the Zurich airport's duty-free section. From there he was able to ship quantities of his booty without a tariff to a waiting world.

Swiss officials quickly detained Hubbard for violating the nation's drug laws, which provided no exemption from the duty-free provision. Myron Stolaroff petitioned Washington for the Captain's release, but the State Department wanted nothing to do with Al Hubbard. Oddly, when a hearing was held, blue-suited officials from the department were in attendance. The Swiss tribunal declared Hubbard's passport invalid for five years, and he was deported. Undeterred, Hubbard traveled to Czechoslovakia, where he had another gram of LSD put into tablet form by Chemapol -- a division of the pharmaceutical giant Spofa--and then flew west.

Procuring a Ph.D. in biopsychology from a less-than-esteemed academic outlet called Taylor University, the captain became Dr. Alfred M. Hubbard, clinical therapist. In '57, he met Ross MacLean, medical superintendent of the Hollywood Hospital in New Westminster, Canada.

MacLean was so impressed with Hubbard's knowledge of the human condition that he devoted an entire wing of the hospital to the study of psychedelic therapy for chronic alcoholics.

According to Metcalfe, MacLean was also attracted to the fact that Hubbard was Canada's sole licensed importer of Sandoz LSD. "I remember seeing Al on the phone in his living room one day. He was elated because the FDA had just given him IND#1," says one Hubbard confidante upon condition of anonymity.

His Investigational New Drug permit also allowed Hubbard to experiment with LSD in the USA. For the next few years, Hubbard -- together with Canadian psychiatrist Abram Hoffer and Dr. Humphry Osmond -- pioneered a psychedelic regimen with a recovery rate of between 60% and 70% -- far above that of AA or Schick Hospital's so-called "aversion therapy." Hubbard would lift mentally-disturbed lifelong alcoholics out of psychosis with a mammoth dose of liquid LSD, letting them view their destructive habits from a completely new vantage point. "As a therapist, he was one of the best," says Stolaroff, who worked with Hubbard until 1965 at the International Federation for Advanced Study in Menlo Park, California, which he founded after leaving Ampex.

Whereas many LSD practitioners were content to strap their patients onto a 3' x 6' cot and have them attempt to perform a battery of mathematical formulae with a head full of LSD, Hubbard believed in a comfortable couch and throw pillows. He also employed icons and symbols to send the experience into a variety of different directions: someone uptight may be asked to look at a photo of a glacier, which would soon melt into blissful relaxation; a person seeking the spiritual would be directed to a picture of Jesus, and enter into a one-on-one relationship with the Savior.

But Hubbard's days at Hollywood Hospital ended in 1957, not long after they had begun, after a philosophical dispute with Ross MacLean. The suave hospital administrator was getting fat from the $1,000/dose fees charged to Hollywood's elite patients, who included members of the Canadian Parliament and the American film community. Hubbard, who believed in freely distributing LSD for the world good, felt pressured by MacLean to share in the profits, and ultimately resigned rather than accept an honorarium for his services.

His departure came as the Canadian Medical Association was becoming increasingly suspicious of Hollywood Hospital in the wake of publicity surrounding MK-ULTRA. The Canadian Citizen's Commission on Human Rights had already discovered one Dr. Harold Abramson, a CIA contract psychiatrist, on the board of MacLean's International Association for Psychedelic Therapy, and external pressure was weighing on MacLean to release Al Hubbard, the former OSS officer with suspected CIA links. Compounding Hubbard's plight was the death of his Canadian benefactor, leaving Hubbard with neither an income nor the financial cushion upon which he had become dependent.

His services were eventually recruited by Willis Harman, then-Director of the Educational Policy Research Center within the Stanford Research Institute (SRI) of Stanford University. Harman employed Hubbard as a security guard for SRI, "although," Harman admits, "Al never did anything resembling security work."

Hubbard was specifically assigned to the Alternative Futures Project, which performed future-oriented strategic planning for corporations and government agencies. Harman and Hubbard shared a goal "to provide the [LSD] experience to political and intellectual leaders around the world." Harman acknowledges that "Al's job was to run the special [LSD] sessions for us."

According to Dr. Abram Hoffer, "Al had a grandiose idea that if he could give the psychedelic experience to the major executives of the Fortune 500 companies, he would change the whole of society."

Hubbard's tenure at SRI was uneasy. The political bent of the Stanford think-tank was decidedly left-wing, clashing sharply with Hubbard's own world-perspective. "Al was really an arch-conservative," says the confidential source. "He really didn't like what the hippies were doing with LSD, and he held Timothy Leary in great contempt."

Humphry Osmond recalls a particular psilocybin session in which "Al got greatly preoccupied with the idea that he ought to shoot Timothy, and when I began to reason with him that this would be a very bad idea...I became much concerned that he might shoot me..."

"To Al," says Myron Stolaroff, "LSD enabled man to see his true self, his true nature and the true order of things." But, to Hubbard, the true order of things had little to do with the antics of the American Left.

Recognizing its potential psychic hazards, Hubbard believed that LSD should be administered and monitored by trained professionals. He claimed that he had stockpiled more LSD than anyone on the planet besides Sandoz--including the US government--and he clearly wanted a firm hand in influencing the way it was used. However, Hubbard refused all opportunities to become the LSD Philosopher-King. Whereas Leary would naturally gravitate toward any microphone available, Hubbard preferred the role of the silent curandero, providing the means for the experience, and letting voyagers decipher its meaning for themselves. When cornered by a video camera shortly before this death, and asked to say something to the future, Hubbard replied simply, "You're the future."

In March of 1966, the cold winds of Congress blew out all hope for Al Hubbard's enlightened Mother Earth. Facing a storm of protest brought on by Leary's reckless antics and the "LSD-related suicide" of Diane Linkletter, President Lyndon Johnson signed into law the Drug Abuse Control Amendment, which declared lysergic acid diethylamide a Schedule I substance; simple possession was deemed a felony, punishable by 15 years in prison. According to Humphry Osmond, Hubbard lobbied Vice-President Hubert Humphrey, who reportedly took the cause of LSD into the Senate chambers, and emerged un-victorious.

"[The government] had a deep fear of having their picture of reality challenged," mourns Harman. "It had nothing to do with people harming their lives with chemicals--because if you took all the people who had ever had any harmful effects from psychedelics, it's minuscule compared to those associated with alcohol and tobacco."

FDA chief James L. Goddard ordered agents to seize all remaining psychedelics not accounted for by Sandoz. "It was scary," recalls Dr. Oscar Janiger, whose Beverly Hills office was raided and years' worth of clinical research confiscated.

Hubbard begged Abram Hoffer to let him hide his supply in Hoffer's Canadian Psychiatric Facility. But the doctor refused, and its believed that Hubbard sent most of his LSD back to Switzerland, rather than risk prosecution. When the panic subsided, only five government-approved scientists were allowed to continue LSD research--none using humans, and none of them associated with Al Hubbard. In 1968, his finances in ruins, Hubbard was forced to sell his private island sanctuary for what one close friend termed "a pittance." He filled a number of boats with the antiquated electronics used in his eccentric nuclear experiments, and left Daymen Island for California. Hubbard's efforts in his last decade were effectively wasted, according to most of his friends. Lack of both finances and government permit to resume research crippled all remaining projects he may have had in the hopper.

After SRI canceled his contract in 1974 Hubbard went into semiretirement, splitting his time between a 5-acre ranch in Vancouver and an apartment in Menlo Park. But in 1978, battling an enlarged heart and never far away from a bottle of pure oxygen, Hubbard make one last run at the FDA. He applied for an IND to use LSD-25 on terminal cancer patients, furnishing the FDA with two decades of clinical documentation. The FDA set the application aside, pending the addition to Hubbard's team of a medical doctor, a supervised medical regimen, and an AMA-accredited hospital. Hubbard secured the help of Oscar Janiger, but the two could not agree on methodology, and Janiger bowed out, leaving Al Hubbard, in his late 70s, without the strength to carry on alone.

Says Willis Harman: "He knew that his work was done."

The Captain lived out his last days nearly broke, having exhausted his resources trying to harness a dream. Like the final fleeting hour of an acid trip --- when the edge softens and a man realizes that he will not solve the secrets of the Universe, despite what the mind had said earlier --- Hubbard smiled gracefully, laid down his six-shooter, and retired to a mobile home in Casa Grande, Arizona.

On August 31, 1982, at the age of 81, Al Hubbard was called home, having ridden the dream like a rodeo cowboy. On very quiet nights, with the right kind of ears, you can hear him giving God hell.

William HYDE

OU Electrostatic Generator

The Hyde Generator notably converts high-V / low-A ES energy to low-V / high-A DC -- and it allegedly is an over-unity device : a free energy generator, according to Moray B. King, who investigated it :

http://rimstar.org/sdenergy/hyde_generator/index.htm --- "It's documented fairly well in US patent 4897592 - Electrostatic energy field power generating system. From private correspondance between William Hyde and Moray B. King (1), a prototype from 1987 that contained around 2000 capacitors and diodes produced the following results: No. rotor segments = 240 // No. stator segments = 480 // Rotor speed = 6000 rpm // ***Output voltage = 602 VDC // Output current = 38 amps // Output power = 22.9 kW // Input power = 2.4 kW // Net output power (while free running) = 20.5 kW ...***

US Patent # 4,897,592

Electrostatic Energy Field Power Generating System

William HYDE

January 30, 1990
1685 Whitney, Idaho Falls, ID 83402

Abstract -- Externally charged electrodes of an electrostatic generator induce charges of opposite polarity on segments of a pair of confronting stators by means of electric fields within which a pair of rotors are confined during rotation to vary the charge binding field linkages between confronting rotors and stators by a shielding action of the rotors in a plane perpendicular to the field flux. A high electric potential difference induced between the stators resulting from such rotation of the rotors, is transformed by an output circuit into a reduced DC voltage applied to a load with a correspondingly increase current conducted therethrough.

Current U.S. Class: 322/2A; 310/309
Intern'l Class: H02N 001/08
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U.S. Patent Documents
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4595852 -- Jun., 1986 Gundlach 310/309.
4622510 -- Nov., 1986 Cap 322/2.

Description

BACKGROUND OF THE INVENTION

This invention relates to the generation of electrical power by conversion of energy from an electrostatic field.

The conversion of energy from a static electric field into useful electrical energy by means of an electrostatic generator is already well known in the art as exemplified by the disclosures in U.S. Pat. Nos. 2,522,106, 3,013,201, 4,127,804, 4,151,409 and 4,595,852. Generally, the energy conversion process associated with such prior art electrostatic generators involves the input of mechanical energy to separate charges so that a considerable portion of the output is derived from the conversion of mechanical energy.

It is therefore an important object of the present invention to provide an electrostatic generator in which electrical power is derived from the energy of static electric fields with a minimized input of mechanical power.

SUMMARY OF THE INVENTION

In accordance with the present invention, static electric fields are established between electrodes externally maintained at charge levels of opposite polarity and a pair of internal stator discs having segmental surfaces that are dielectrically spaced to confine thereon charges induced by the electric fields. A pair of rotor discs are rotated within continuous electric fields in planes perpendicular to the field flux to locationally vary the charge linkage established by the electric fields between the electrodes and stator discs. Such changes in charge linkage are effected by rotation of electrically conductive segments of the rotor angularly spaced from each other to partially shield the stator discs from the electric fields. The segments of each rotor disc have charged faces confronting the electrodes in its field to shield the stator disc over a total face area that is one-half the total area of the confronting segment surfaces on the stator disc to which the induced charges are confined. Charges on the rotors and stators are equalized by electrical interconnections established through the rotor shafts. The stator discs are electrically interconnected with an electrical load through an output circuit transforming a high potential between the stator discs into a reduced dc voltage to conduct a correspondingly multiplied current through the load.

BRIEF DESCRIPTION OF DRAWING FIGURES

These and other objects and features of the present invention will become apparent from the following description taken in conjunction with the preferred embodiments thereof with reference to the accompanying drawings in which like parts or elements are denoted by like reference numerals throughout the several views of the drawings and wherein:

FIG. 1 is a simplified electrical circuit diagram corresponding to the energy conversion system of the present invention.

FIG. 1

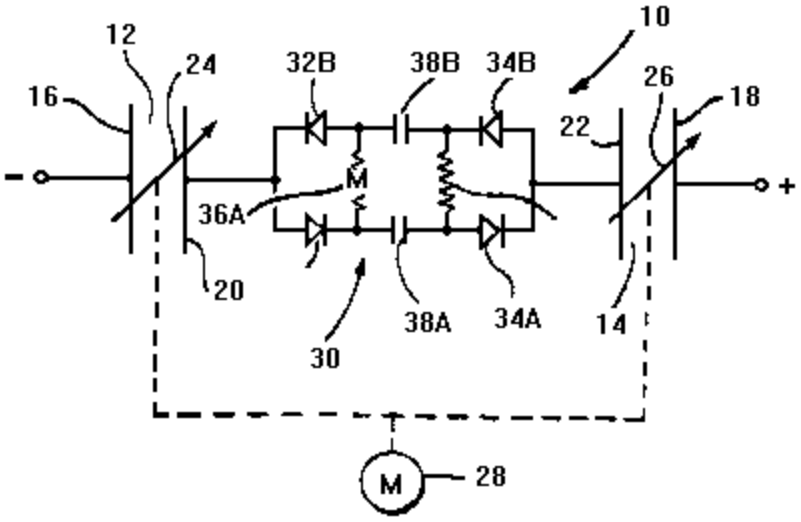
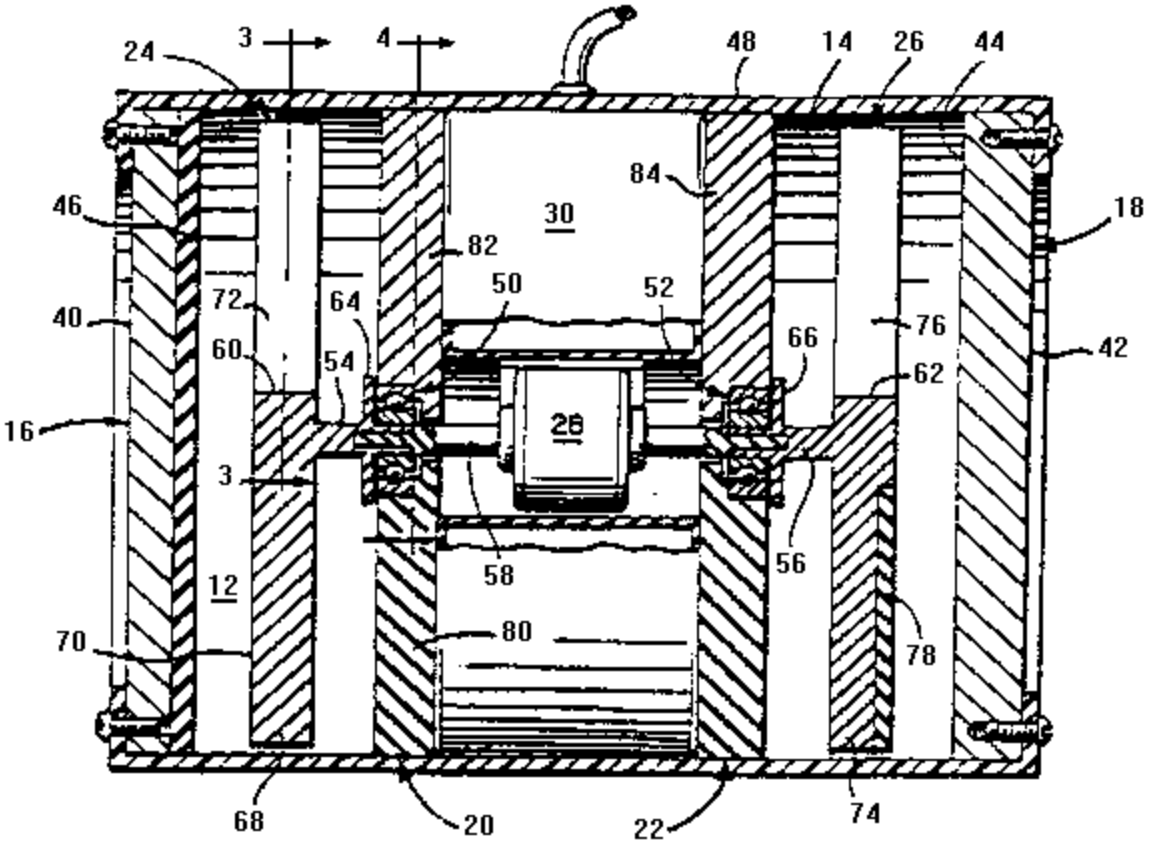


FIG. 2 is a side section view of an electrostatic generator embodying the system of FIG. 1 in accordance with one embodiment of the invention.

FIG. 2



FIGS. 3 and 4 are partial section views taken substantially through planes indicated by section lines 3--3 and 4--4 in FIG. 2.

FIG. 3

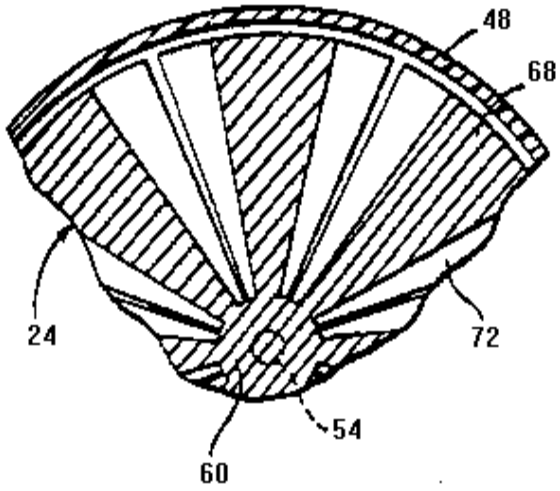
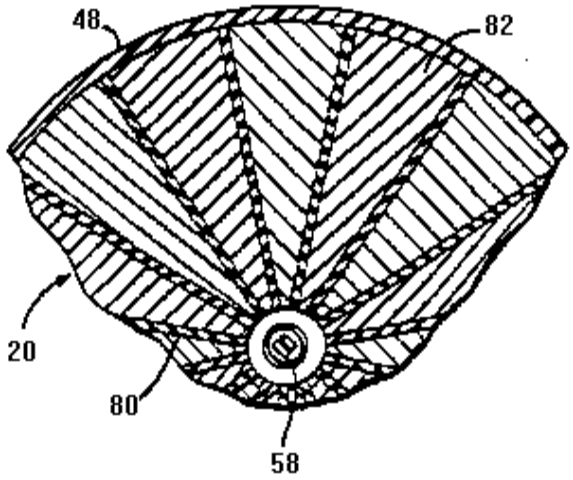


FIG. 4



FIGS. 5A and 5B are schematic partial laid out top views of the electrostatic generator of FIGS. 2-4, under static and dynamic charge distribution condictions, respectively.

FIG. 5A

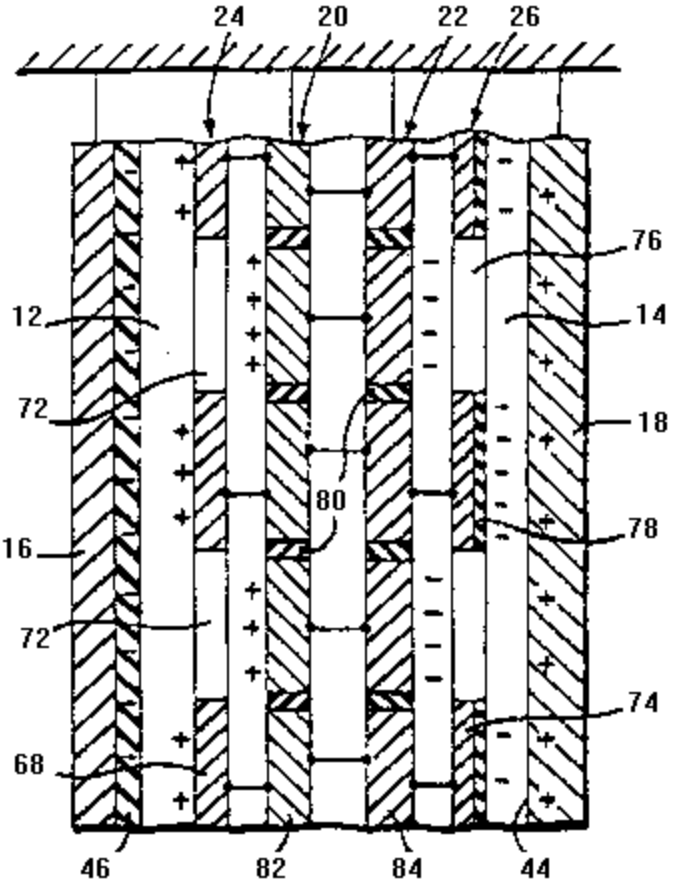

24
20
22
26
76
12
14
72
18
80
78
16
72
74
68
46
82
84
44

FIG. 5B

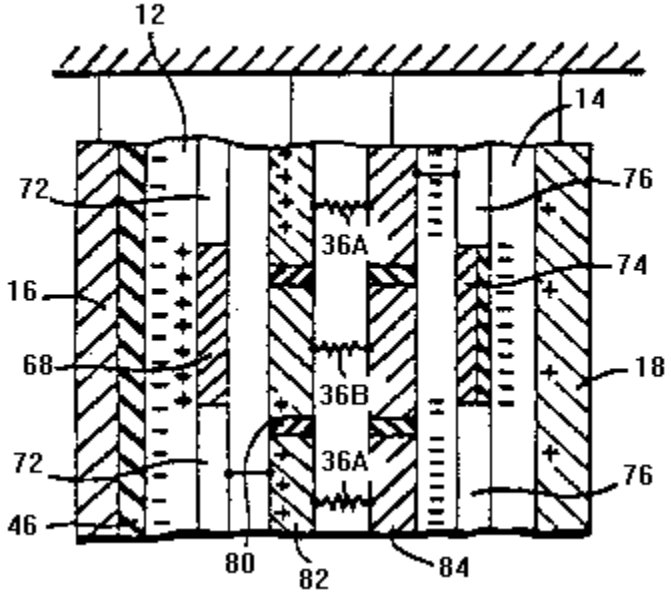
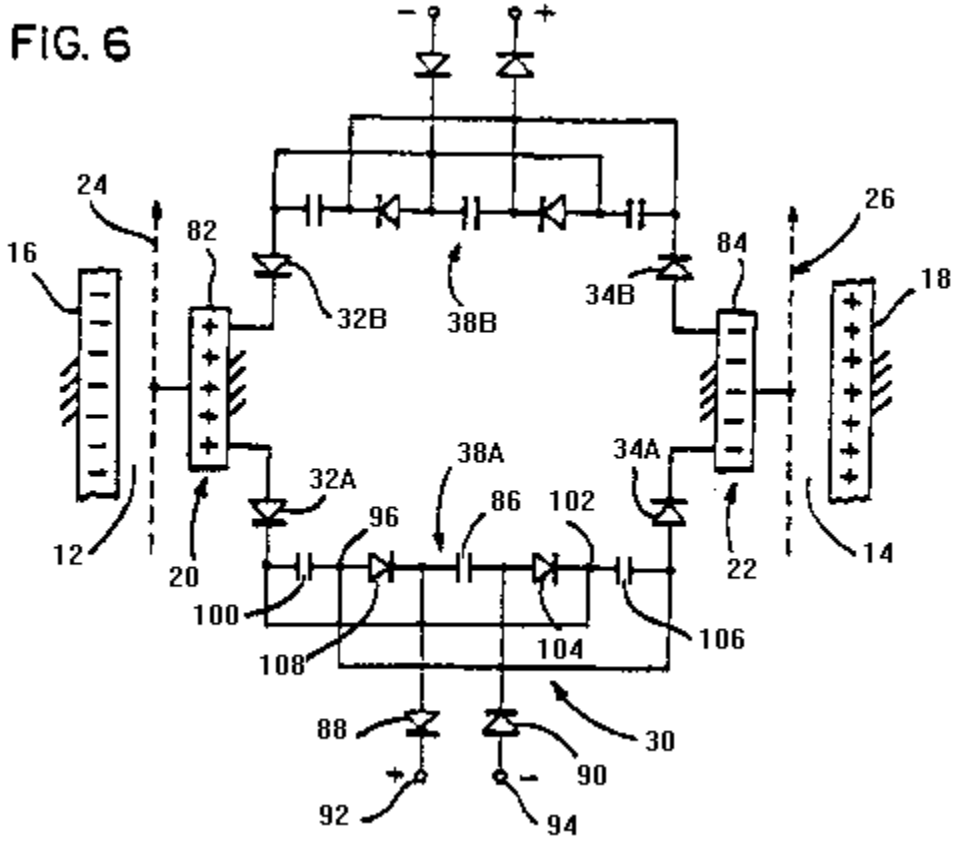

12
14
72
76
36A
74
16
68
18
36B
72
36A
76
46
80
82
84

FIG. 6 is an electrical circuit diagram of the output circuit of the generator shown in FIG. 2, in accordance with one embodiment.



DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

Referring now to the drawings in detail, FIG. 1 diagrammatically depicts the energy conversion system of the present invention generally referred to by reference numeral 10. As diagrammed in FIG. 1, the system includes a pair of electrostatic fields 12 and 14 established by electrostatic charges of opposite polarity applied to electrode plates 16 and 18 from some external energy source. Thus, the electrostatic field 12 is established between electrode 16 and a stator disc 20 while the electrostatic field 14 is established between electrode 18 and a stator disc 22. In accordance with the present invention, electrostatic charge linkages established by the flux of the fields between the electrodes and stators are periodically varied by displacement within continuous energy fields 12 and 14 in response to rotation of rotors 24 and 26 aligned with planes perpendicular to their common rotational axis and the field flux as will be hereinafter described. The rotors are mechanically interconnected with an electric motor 28, as diagrammatically illustrated in FIG. 1, for rotation about the common rotational axis. Electrical energy may be extracted from the electric fields 12 and 14 during rotation of the rotors 24 and 26 by motor 28 through an output circuit generally referred to by reference numeral 30. The output circuit 30 as shown, in FIG. 1 in a simplified fashion, includes two pair of current conducting diodes 32A, 32B and 34A, 34B. The diodes of each pair are oppositely poled and each pair

is connected in parallel to one of the stators 20 and 22. The diodes of each pair are also electrically connected across an electrical load represented by resistors 36A and 36B with capacitor networks 38A and 38B interconnected between each pair of diodes by means of which the voltage potential between the stators 20 and 22 is reduced in favor of an increased current through the electrical load.

Referring now to FIGS. 2, 3 and 4 in particular, a physical embodiment of the energy conversion system diagrammed in FIG. 1 is shown. The electrodes 16 and 18 are in the form of circular plates or discs made of an electrically conductive metal having external surfaces 40 and 42 adapted to be charged from the external source as aforementioned. The internal surface 44 of electrode 18 is thereby adapted to maintain a positive charge opposite in polarity to the negative charge of the electrode 16 which is maintained in a stable ion form within a dielectric surface portion 46 of the electrode 16. The energy conversion system may be enclosed within an outer housing 48 to which the electrodes 16 and 18 are secured.

With continued reference to FIG. 2, the stators 20 and 22 mounted by housing 48 in axially fixed spaced relation to the electrodes 16 and 18 are provided with bearings 50 and 52 establishing the aforementioned common rotational rotor axis journaling a powered shaft assembly having electrically conductive shaft sections 54 and 56 to which the rotors 24 and 26 are respectively connected. In the embodiment illustrated in FIG. 2, the drive motor 28 is mechanically interconnected with the shaft sections 54 and 56 through an electrically nonconductive shaft section 58 of the power shaft assembly for simultaneous rotation of both rotors 24 and 26 at the same speed and in the same direction about the common rotational axis perpendicular to parallel spaced planes with which the electrode and stator discs are aligned. The electrically conductive shaft sections 54 and 56 are respectively keyed or secured in any suitable fashion to hub portions 60 and 62 of the rotors and are provided with flange portions 64 and 66 forming electrical wipers in contact with confronting surfaces of the stators 20 and 22, which are inductively charged by the static electric fields 12 and 14 to equal levels of opposite polarity.

As more clearly seen in FIGS. 2 and 3, the rotor 24 has a plurality of angularly spaced, field linkage controlling segments 68 projecting radially outwardly from the hub portion 60. Each rotor segment 68 is made of an electrically conductive metal having a face 70 on one axial side confronting the adjacent electrode 16. The faces 70 confronting the electrode 16 are charged positively by the electric field 12 extending between the dielectric surface portion 46 of electrode 16 and the stator disc 20. While the electric field 12 projects through the spaces 72 between the rotor segments 68, the rotor segments 68 themselves shield portions of the stator disc 20 from the electric field.

The rotor 26 is similarly formed with rotor segments 74 angularly spaced from each other by spaces 76 through which the electric field 14 extends between the positively charged surface 44 of electrode 18 and the stator 22. The rotor segments 74 of rotor 26 as shown in FIG. 2, are provided with dielectric surface portions 78 confronting the internally charged surface 44 of electrode 18. While the rotor segments 74 are negatively charged by the electric field 14 within the surface portions 78, they also shield portions of the stator disc

22 from the electric field as in the case of the rotor segments 68 hereinbefore described. The internal dielectric surface portion 46 of electrode 16 and dielectric surface portions 78 of rotor 26 act as a stabilizer to prevent eddy currents and leakage of negative charge. Further, in view of the electrical connections established between the rotors and the stator discs, the charge on each stator is equalized with that of the charge on its associated rotor.

As shown in FIGS. 2 and 4, the stator disc 20 includes a plurality of segments 82 to which charges are confined, closely spaced from each other by dielectric spacers 80. The segments 82 are electrically interconnected with the rotor segments 68 through rotor shaft section 54. Similarly, the segments 84 of the stator 22 are electrically interconnected with the rotor segments 74 through rotor shaft section 56. The stator segments 82 and 84 are therefore also made of electrically conductive metal. Each of the segments 82 of stator 20 is electrically interconnected through the output circuit 30 with each of the segments 84 of the stator. The stator discs being fixedly mounted within the housing 48, centrally mount the bearings 50 and 52 through which the electrically nonconductive motor shaft section 58 is journaled as shown in the embodiment of the invention illustrated in FIG. 2. Further, the total area of the charged segment surfaces on each of the stator discs is greater than the total area of the faces 70 or 78 on the segments of each associated rotor disc 24 or 26. According to one embodiment, the total charged stator surface area is twice that of the rotor face area.

According to the embodiment of the invention illustrated in FIG. 6, the output circuit 30 includes the two oppositely poled capacitive circuit networks 38A and 38B connected across each aligned pair of stator segments 82 and 84 on the stators 20 and 22 by means of the oppositely poled diodes 32A and 34A. Each of such capacitive circuit networks includes a capacitor 86, the opposite sides of which are connected by oppositely poled diodes 88 and 90 to positive and negative load terminals 92 and 94 across which a suitable electrical voltage is established for operating an electrical load. The diode 88 is connected to the junction 102 between diode 104 and one side of capacitor 106. The diode 88 is also connected to the junction between one side of capacitor 100 and the diode 32A. The diode 90, on the other hand, is interconnected with the junction 96 between diode 108 and capacitor 100. Also, diode 90 is connected to the junction between the other side of capacitor 106 and the diode 34A. The foregoing circuit arrangement of capacitive network 38A is the same as that of network 38B by means of which aligned pairs of the stator segments 82 and 84 have the electrical potentials therebetween transformed into a lower voltage across the load terminals 92 and 94 to conduct a higher load current.

FIG. 5A illustrates the distribution of charges established in the electric fields 12 and 14 between the electrodes and stators under static conditions in which each of the rotor segments 68 and 74 is positioned in alignment with one of the stator segments 82 and 84 to thereby shield alternate stator segments from the electric fields. The charges established by the electric fields are therefore confined to the faces of alternate stator segments confronting the electrodes and are equalized with the charges established on and confined to the shielding faces of the rotor segments confronting the electrodes by virtue of the electrical interconnection between the rotors and stators as aforementioned. As depicted in FIG. 5B, when rotation is imparted to the rotors, the charge linkages established by the

electric fields between the electrodes and alternate stator segments 82 or 84 are interrupted by the moving rotor segments 68 or 74 so that previously sielded stator segments become exposed to the fields to reestablish field energy linkages with the associated electrodes. Such action causes electrical potentials to be established between the stator segments 82 and 84.

It will be apparent from the foregoing description that the electrostatic energy fields 12 and 14 of opposite polarity are established maintained between the externally charged electrodes 16 and 18 and the internally charged stators 20 and 22 under static conditions as depicted in FIG. 5A. During rotation, the rotors 24 and 26 continuously disposed within such energy fields 12 and 14, exert forces in directions perpendicular to the field flux representing the energy linkages between electrodes and stators to cause interruptions and reestablishment of energy linkages with portions of different stator segments as depicted in FIG. 5B. Such energy linkage locational changes and the charge binding and unbinding actions between electrodes and stators creates an electrical potential and current to flow between stators through the output circuit 30. Thus, the output circuit when loaded extracts energy from the electric fields 12 and 14 as a result of the field linkage charge bindinbg and unbinding actions induced by rotation of the rotors. The stator segments 82 and 84 shielded from the electric fields by the moving rotor segments 68 and 74 as depicted in FIG. 5B, have electric potentials of polarity opposite to those of the external electrodes 16 and 18 because of the field linkage charge unbinding action. Previously shielded stator segments being exposed to the electric fields by the moving rotor segments, have the same electric potential polarity as those of the external electrodes because of field linkage binding action. Since the forces exerted on the respective rotors by the electric fields 12 and 14 of opposite polarity act on the common rotor shaft assembly perpendicular to said fields, such forces cancel each other. The energy input to the system may therefore be substantially limited to mechanical bearing losses and windage during conversion of electrostatic field energy to electrical energy as well as electrical resistance losses and other electrical losses encountered in the output circuit 30.

Based upon the foregoing operational characteristics, rotation of the rotors in accordance with the present invention does not perform any substantial work against the external electric fields 12 and 14 since there is no net change in capacitance thereby enabling the system to convert energy with a reduced input of mechanical energy and high efficiency, as evidenced by minimal loss of charge on the electrodes. It was therefore found that working embodiments of the present invention require less than ten percent of the electrical output energy for the mechanical input. Further, according to one prototype model of the invention, a relatively high output voltage of 300,000 volts was obtained across the stators. By reason of such high voltage, an output circuit 30 having a voltage reducing and current multiplying attribute as hereinbefore described was selected so as to render the system suitable for many practical applications.

The foregoing is considered as illustrative only of the principles of the invention. Further since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and

described, and, accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

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http://rimstar.org/sdenergy/hyde_generator/index.htm

Hyde Generator Replication

The Hyde generator is a device developed by William W. Hyde that puts out more energy than is used to run it (to me this means it must tap into some unexpected energy source.) It's basically a large high voltage capacitor with spinning rotor segments actually in between the capacitor plates, chopping the electric field at high speed (> 6000 RPM.) Stator segments are also in between the capacitor plates and it is actually the electric field between the stator segments and the capacitor plates that is chopped. The resulting output energy is taken off of the stator plates using capacitor/diode networks.

It's documented fairly well in US patent 4897592 - Electrostatic energy field power generating system. From private correspondance between William Hyde and Moray B. King (1), a prototype from 1987 that contained around 2000 capacitors and diodes produced the following results:

No. rotor segments 240
No. stator segments 480
Rotor speed 6000 rpm
Output voltage 602 VDC
Output current 38 amps
Output power 22.9 kW
Input power 2.4 kW
Net output power (while free running) 20.5 kW

My 1st replication attempt

My 1st attempt was with a vacuum cleaner motor at one end and an 18" long shaft with everything attached. The long shaft made it too unstable at high speed. The best I could safely do was around 2700 RPM.

My 2nd replication attempt

I first finished all parts for my 2nd attempt, assembled it and ran it for the first time on April 7, 2009. By April 23, 2009 I'd found I was unable to get the motor to spin the disks faster than 4000 RPM. The motor is rated at 10,000 RPM no-load and can do that with featureless disks but can do only 4000 RPM with the completed disks. My guess is the disks with their radially cut slots and metal segments attached act like fans and the air load is too high.

Video :

<object width="425" height="344"><param name="movie"

value="http://www.youtube.com/v/B_SI4266L5o&color1=0x234900&color2=0x4e9e00&hl=en_US&feature=player_embedded&fs=1"></param><param name="allowFullScreen" value="true"></param><param name="allowScriptAccess" value="always"></param><embed src="http://www.youtube.com/v/B_SI4266L5o&color1=0x234900&color2=0x4e9e00&hl=en_US&feature=player_embedded&fs=1" type="application/x-shockwave-flash" allowfullscreen="true" allowScriptAccess="always" width="425" height="344"></embed></object>

The construction details are below, following these updates.

May 1, 2009 - Lowered air pressure to decrease load

At the suggestion of Paul on overunity.com I sealed the box and lowered the pressure with a household vacuum cleaner motor. I managed to drop the pressure by about 0.5 PSI (around 1 inch Hg). I didn't see any improvement in RPM, the best being around 3900 RPM, so I would have to drop the air pressure even more. The outer acrylic window was seriously bowed inward so I don't think I'd want to do further improved sealing without replacing the window with a solid board. I'd also be afraid of going further out of fear of damaging my vacuum cleaner. It was worth a try though.

May 5, 2009 - Sealed edges with packing tape - 4500 RPM!

I guessed that maybe if I sealed the area where each rotor is, once the air gets moving, since it's enclosed in a circular pathway, it will keep most of its momentum and act like less of a load and I'd be picking up less new dead air. Plus, in the patent the rotors are sealed in a circular housing in the same manner. I got 4500 RPM, an encouraging improvement. I used clear packing tape so I wonder if I used something less crinkly if it would be even better. Still no HV spikes, but Hyde didn't get those until around 6000 RPM

May 19, 2009 - Higher input voltage, sealed rest of housing, and a bang! - 5200 RPM!

At Luc's suggestion I decided to run it with higher than the motor's rated input voltage of 110VAC, something I was previously reluctant to do but as Luc said "I was so close to the 6000 RPM". Luc pointed out to me how to get 2 phases out of my wall sockets to get up to 220VAC and even more using variacs (which I didn't realize variacs would do), but for starters I tried it with just one variac at its maximum output of 130VAC. I got 4660 RPM! My previous best at 4500 RPM at 110VAC so it looks like I'd get around 80 RPM for each 10VAC I add; not much.

Then I decided that since I had big success on May 5 (reported above) with sealing just the area where the rotors were and since at 4660 RPM it was screaming like a banshee from the air coming out of the holes in the wooden box, I should seal the area where the motor was too, just as is done in the patent. Success, I got 5200 RPM! Only 800 RPM to go.

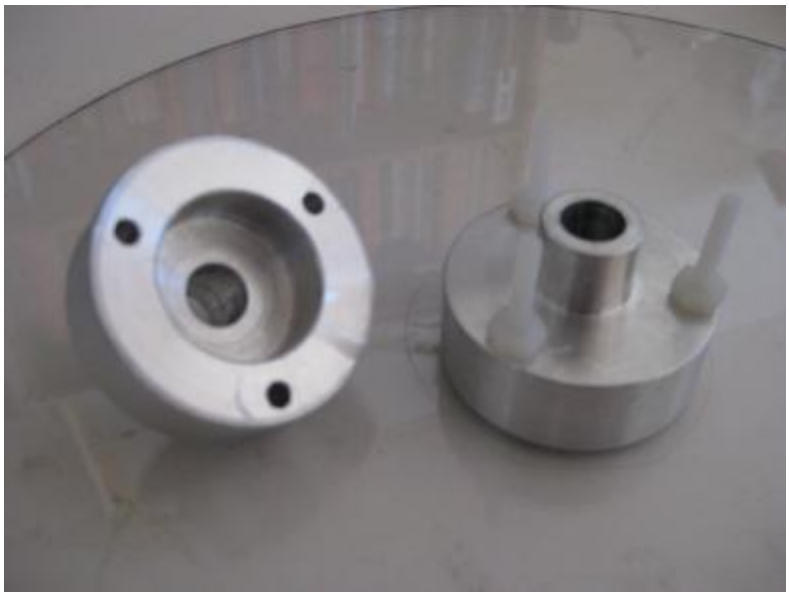
Here are some scope shots. The AC is expected and normal. It's HV spikes that I'm after but at no speed or voltage did I see any. The 757 Hz from the scope shot below is per segment, not per rotation of the entire rotor. There are 9 segments per rotor so to get RPM take the 757 Hz and

divide by 9 to get rotations per second for the whole rotor. Then multiply by 60 to get rotations per minute (RPM), 5046 RPM. However, I did get 5200 RPM at one point, just no photo of the scope at the time. The voltage was set to 3kV when it was at 5200 RPM, the same voltage Hyde was using when he was doing 2 kW in and getting 20 kW out.

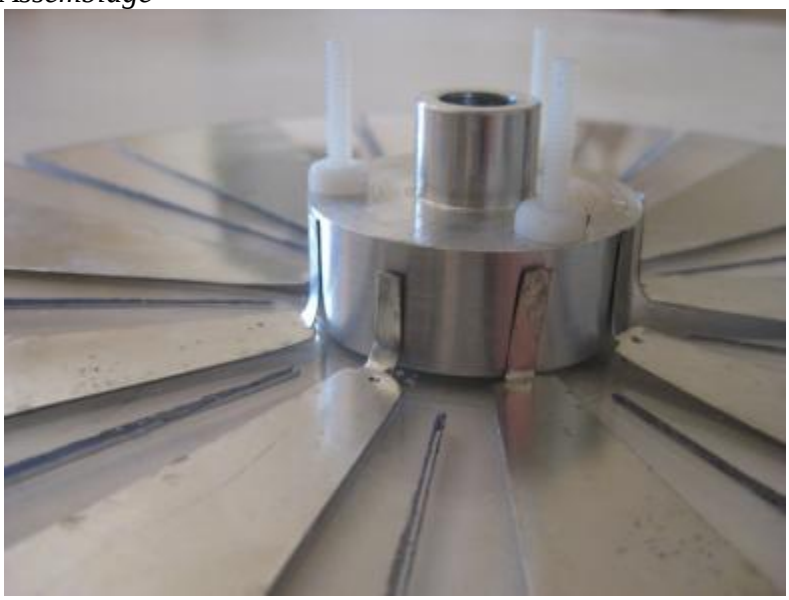
And then there was a muffled bang and the whole box began to slowly slide across the floor. One of the segments had come off a rotor (the bang) and this unbalanced the whole thing (the slow sliding.) The only damage was a hole in the packing tape where the segment flew out from between the rotor/stator area and the mangled segment from when it hit the inside of the box in an awkward area which caused it to bounce around.

Disks --

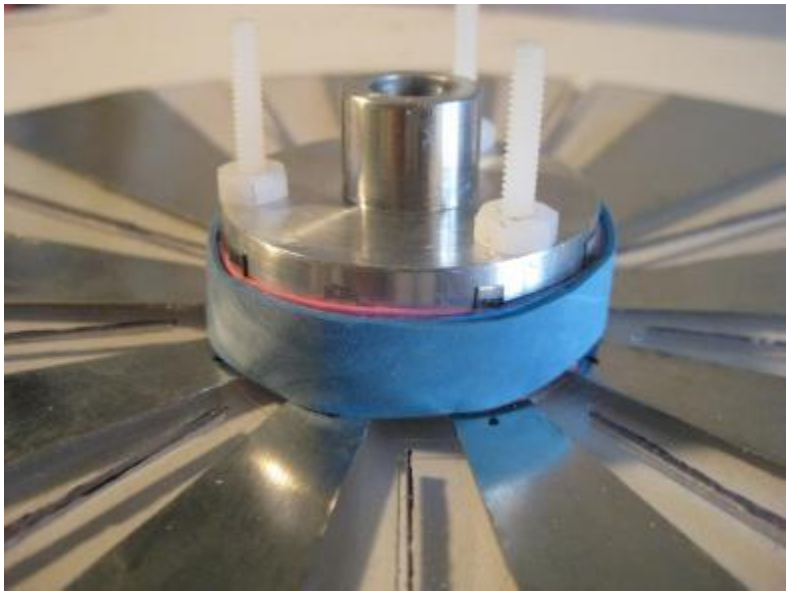
Hubs --



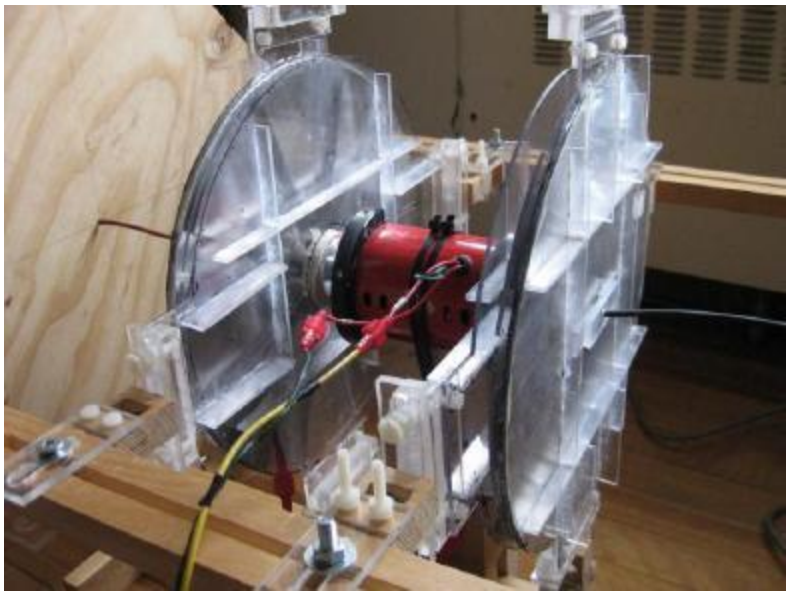
Assemblage --



With rubber bands --



Closeup --



Sealed Unit --

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http://www.sae.org/technical/papers/929472

An Enhanced Quad-Disc Electrostatic Generator

Document Number: 929472
Date Published: August 1992
Author(s): **Donald A. Kelly - Space Energy Association**

Abstract : The conventional twin-disc wimshurst type of electrostatic generator has considerably increased potential as a high voltage output sources when two additional stator

discs are utilized on each side of the usual twin, counterrotating rotor discs. The emergence of the hyde type of electrostatic generator has spurred some interest in high voltage elect rostatic generators of this general type, but unfortunately the hyde E/S technology is not practical, and has a number of technical errors in it which make it unworkable. In the quad-disc electrostatic the basic principles of the wimshurst twin counterrotating E/S discs are preserved, and in addition a twin rotor-to-stator E/S generating factor is included in this composite quad-disc electrostatic generator. The twin, counterrotating rotor discs form the basic E/S components, and have both the non-contacting neutralizing brushes, and the non-contacting collector brushes. The positive and negative satator discs on each side of each rotor disc receive E/S transfer from the multiple conductive segments on the outer sides of each rotor disc. The normal E/S transfer occurs from the segments on the inner surfaces of each of the rotor discs. The number of conductive segments of each of the rotor and stator discs will range from a low of 30 segments, to a maximum of 60 segments, depending on the disc diameter and the voltage/amperage balance per segment. The voltage and current amplification function for the enhanced quad-disc E/S generator will be accomplished by twin, large capacitive transformers, similar to those used in the present Swiss M-L converter.

The key components within these twin large captive transformers are the twin, large bi-filar wound coils over ferrite magnet stacks which transduce space energy into these polarized components. The wattage amplification factor is not generally recognized in present applied physics, but since the phenomena occurs in four F/E projects, past and present, it is an accomplished fact in advanced physics today! The enhanced quad- disc electrostatic generator design holds considerable promise for providing a useful high-voltage-to-normal wattage power source, as the concept is further evolved and developed.

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http://www.icestuff.com/~energy21/notes.htm

Excerpts --

Back-Engineered Methernitha – Notes

by John BEDINI

Note 23 – Some other generators with similarities to the Testatika machine are the "Electrostatic Energy Field Power Generating System" invented by William W. Hyde (US Patent 4897592 of Jan 30 1990) is a rotor/stator variable capacitance machine capable of producing 300 KV... [&c.]

Note 1 – For more information on the Pidgeon machine see "Electrical Influence Machines" by John Gray 1903 pp206 & "Philosophical Magazine" Dec 1898 pp564, and of course the Pidgeon patents.

Note 2 – See "Modern High Speed Influence Machines" by V.E.Johnson 1921 pp76. Johnson was not only a researcher of electrostatic machines but was also an innovative constructor of them, and as such was keen to try any technique that made his generators more powerful than

even the specialised Wommelsdorf multi-disc condenser machines. This book is an absolute must for those who wish to work in this field.

Note 3 – See "Self-Excited, Alternating, High-Voltage Generation Using A Modified Electrostatic Influence Machine" by M.Zahn et al, American Journal of Physics Vol 42 (1974) pp289.

Note 4 – The Methernitha designers have taken a basic Pidgeon electric field system and added a few modifications of their own, partly to lock a certain polarity of charge to a certain area so as to stabilise it, and also to boost certain areas with charge... [&c]

Note 7 – See US Patent 1,540,998 (9 June 1925) Conversion of Atmospheric Electric Energy by Hermann Plauson. He also wrote a book of the subject titled "Gewinnung und Verwertung der Atmospharischen Elektrizitat" in 1920 in German.

Note 11 – The phenomenon of electrostatic motors has been well researched over the years (see "Electrostatic Motors" O.Jefimenko in "Physics Teacher" Vol 9 March 1971 p121-9, and in "Electrostatics – And Its Applications" by A.D.Moore (1973) p131-147; "Electrostatic Motors" by B.Bollee in "Philips Tech. Review" Vol 30 1969 p178-194)... [&.]

Note 12 – J.G.Trump worked for the US Air Force and pioneered some highly efficient electrostatic machines around the 1960's (see"Electrostatic Sources of Electric Power" in "Elec. Eng" 66:525 June 1947; and "High Voltage Generation in Space:The Parametric Electrostatic Machine" in "Progr. Astronaut. Rocketry" (vol 3 – Energy Conversion for Space Power) 1961 p745).

Note 14 – See "Plasma – The Fourth State of Matter" by D.A. Frank-Kamenetskii (1972) pp10, and Dr.Patrick Flanagan's US patents 4,743,275(May 10 1988) and 4,391,773(Jul 5 1983).

Note 21 – US patents 3,323,069 (May 30 1967) and 3,187,208 (June 1 1965). This system by Van de Graaff may be a little too complicated for the Methernitha, but, nevertheless, may be of some interest.

Note 22 – Dr. Flanagan modified his insulator blocks, made of resin, by doping them with paramagnetic granules (such as silicon carbide) to enhance even more the electron cascade effect; which is an idea that the physicist Thomas Townsend Brown first experimented with (by using lead oxide granules) in his US patent 3,187,206 (June 1 1965) to good effect.

Note 23 – Some other generators with similarities to the Testatika machine are the "Electrostatic Energy Field Power Generating System" invented by William W. Hyde (US Patent 4897592 of Jan 30 1990) is a rotor/stator variable capacitance machine capable of producing 300 KV. Other such generators are; "Parametric Electric Machine" invented by Ferdinand Cap (US Patent 4622510 of Nov 11 1986) which has a series resonant (LCR) circuit structured into it so that it oscillates - and indeed operates AT RESONANCE to ensure a high output; "Electrostatic Generator" invented by Dan B. Le May (et al) (US Patent 3094653 of Jun 18 1963) is a very ingenious system of variable capacitance; the "Electrostatic Machine" by Noel Felici (US Patent

2522106 of Sep 12 1950) is a good standard which utilizes a valve rectifier; and the "Electrostatic Generator" by William S. Spencer (US Patent 1415779 of May 9 1922) is an early rotor/stator generator which transferred its electric impulses through a transformer to produce a higher current output.

Osamu IDE
OU Capacitance Motor

http://twm.co.nz/newparsci.htm

New Paradigm of Science

Josef Hasslberger

[I paid] a visit to Osamu Ide's Clean Energy Laboratory, and [had] a special meeting, on 23 November, [1996 with]

Osamu Ide, the head of the Japanese Green Cross Society's Clean Energy Laboratory, told about a motor developed by him, which operates by discharge of a capacitor in an LC circuit. The motor utilizes the magnetic attraction between a pair of coils (the stator) and a ferromagnetic core (configured as a rotor) which moves between the coils. The unconsumed magnetic energy is recycled by recharging the capacitor. Ide says he observed an unusual increase of recharge voltage, which occurs only when the magnetic fields of opposing coils are opposing each other. The ferromagnetic core does not receive negative torque during the discharge. Ide believes he is witnessing a possible over-unity effect and has published an article about his motor in the Journal of Applied Physics, 77 (11) of 1 June 1995, entitled "Increased voltage phenomenon in a resonance circuit of unconventional magnetic configuration".

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http://www.padrak.com/ine/DPHYSIK696.html

New Energy News -- NEN, Vol. 4, No. 2, June 1996, pp. 8-9.

"Has Osamu Ide Observed a Violation of the Energy Conservation Law?" by Stefan Marinov. The abstract is: "After presenting shortly the recent electromagnetic motor of Osamu Ide, I show that it is a repetition of the historic Edwin Gray's pulsed capacitor discharge electric engine. Similarly as Gray, Ide has observed a violation of the energy conservation law, due to the appearance of induced forth electric tension. I show that forth electric tension is induced in every electromagnetic generator and motor when the phase difference between tension and current is near to 90 degrees, and I report on simple experiments where induced forth tensions lead to a patent violation of the energy conservation law." Marinov loves to discuss experiments that demonstrate violations of scientific laws.

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http://www.intalek.com/Index/Projects/Research/jap77.pdf
***J. Applied. Phys.*, Vol. 77, No. 11, 1 June 1995.**

Increased Voltage Phenomenon in a Resonant Circuit of Unconventional Magnetic Configuration

by

Osamu Ide.

The behavior of an LCR (inductance-capacitance-resistance) circuit with a movable ferromagnetic core is discussed. The core is attracted by a magnetic field generated by an electric current resulting from the discharge of a capacitor in the closed LCR circuit. An unusual increase in recharge voltage, which was dependent on the magnetic configuration of the coil, was observed. This voltage increase does not conform to the mathematical simulation of the system. The possibility that a positive electromotive force was involved in this effect is discussed.'

I. INTRODUCTION

The author has been developing a motor operated by the discharge of a capacitor in an LCR (inductance-capacitance- resistance) circuit. Unlike conventional dc motors, this motor utilizes the magnetic force of attraction between a current- carrying coil and a movable ferromagnetic core. The force of attraction between the two components resulting from the capacitor discharge is converted to a rotary force. The uncon- sumed magnetic energy is recycled as electrical energy by recharging the capacitor.

In the course of developing this motor, it was discovered that the recharge voltage depends on the precise configuration of the system.

The purpose of this paper is to describe the increased voltage phenomenon observed in the above system. A differential equation that expresses the phenomenon, as. well as computer simulations, are also discussed.

It is appropriate here to briefly discuss other machines based on a similar magnetic phenomenon. Many attempts have been made to operate machinery that utilizes the non- linear phenomenon of magnetism, such as ferroresonance1'2 and parametric resonance.3 The basic features of these machines is the magnetic saturation effect. The machines primarily make use of the transition from a nonresonant state to a resonant state, i.e., from the high inductance of a nonsaturated state to the low inductance of a saturated state, converting these two modes to either oscillation or amplification. It should be noted that the present system is completely different from these machines, since there is no magnetic saturation in the coils. Voltage changes found in the system occur during the transition from a low-inductance state to a high-inductance state, and are not subjected to the sudden drop or rise typically associated with ferroresonance and parametric resonance. In other words, other systems operate in a closed magnetic field, whereas the system described here operates in an open magnetic field. Electrically, this system is basically closed, since the only power source used here is a charged capacitor; it has no ac power supply such as that used to operate other magnetic machines...

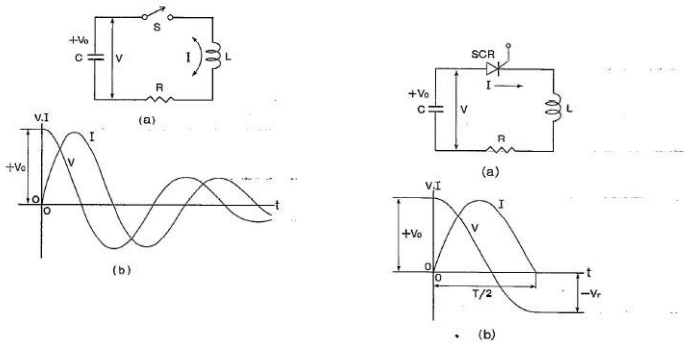


FIG. 2. (a) *LCR* Circuit with a SCR instead of a switch. (b) Half-cycle voltage and current oscillations of the circuit.

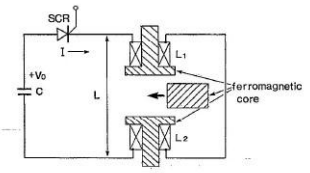
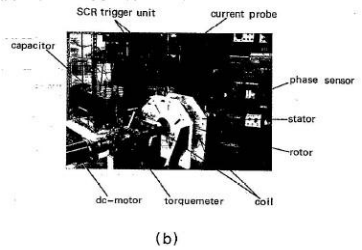


FIG. 3. *LCR* circuit with two coils and a movable ferromagnetic core inserted between the coils.



(b)

FIG. 4. Experimental setup.

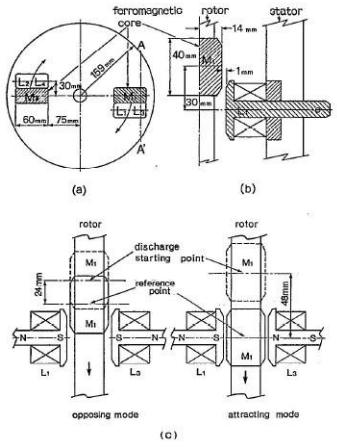


FIG. 5. Specific geometry of the electromagnets and the ferromagnetic core: (a) as viewed from the direction of the axis, (b) the cross section when cut from line A to A′, and (c) the stator and rotor at the reference points and the discharge-initiation points.

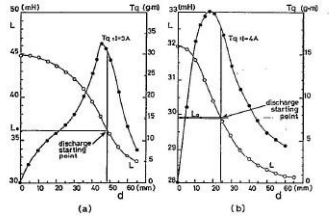


FIG. 6. Combined inductance (L) and torque (Tq) between the electromagnet and the ferromagnetic core. The torque was measured under conditions of constant current. Values of L and Tq for (a) the attracting mode, and (b) the opposing mode.

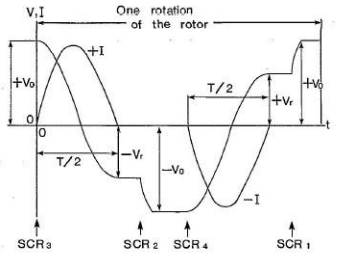


FIG. 7. Voltage and current changes during one rotation of the rotor. The SCR turn-on points are also indicated.

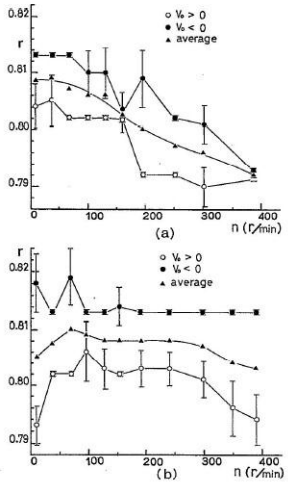


FIG. 8. Results of the experiment—voltage return rate (r) for (a) the attracting mode, and (b) the opposing mode.

V. DISCUSSION

The mathematical analysis in the previous section reveals that the recharge voltage decreases as the core speed increases. With a constant core speed, it predicts that the recharge voltage will decrease as a increases.

The reason for the decrease in the recharge voltage can be given as follows. The displacement of the core during discharge means there is a mechanical output in the system. It is reasonable to conclude that the mechanical motion of the core is compensated for by a decrease in recharge voltage. The cause of the increase in the apparent resistance R is considered to be the back EMF generated by the movement of the core. For a constant rotor speed, it is clear that a coil with a large a has a large attracting force.

However, the results differ in the case of the opposing mode. Though a is positive, r increases over the range up to a certain speed. After the peak, r decreases slightly but remains greater than the initial value.

These results can be explained from the assumption that the complex movement of the flux could generate a positive EMF: the increase in the recharge voltage is due to an EMF in the same direction as the discharge current, different from the back EMF caused by Faraday's law.

The past controversy concerning electromagnetic induc- tion might shed some light on this viewpoint. On this topic, several authors have stated that the motional EMF caused by the cutting of the magnetic flux and the induced EMF caused by Faraday's law were independent phenomena.4'5 These two different types of EMF are generally expressed by the following equation:

I (BXv)dl. Jo (12)

It can be postulated that these two types of EMF have contradicting effects within the coil, and that the motional EMF has a positive effect on the recharge voltage over a certain range of core speed.

This hypothesis seems to be consistent with the results, but is also highly speculative. It would be necessary to confirm its validity through further experimentation.

VI. CONCLUSIONS

In this paper, the behavior of an LCR circuit with a movable ferromagnetic core was discussed. The increase in the inductance of the coil, which is caused by the attraction of the core during discharge, yielded the following results.

(1) The recharge voltage is generally smaller when the core moves than when it is stationary. The decrease in the recharge voltage depends on the rate of change of the inductance. The simulation based on the theoretical equation confirmed the experimental results.

(2) When applying opposing magnetic fields to the facing coils, an increase in the recharge voltage can be observed in an electrically closed LCR circuit. The apparent resistance of the coil decreased correspondingly.

(3) It can be postulated that the complex movement of mag- netic flux generates a positive EMF, but the cause of the voltage increase is not clear.

PATENTS

JP63043577

POWER SUPPLY CIRCUIT FOR MOTIVE POWER

Inventor: IDE OSAMU

Applicant: HASHIMOTO YUKIO ; IDE OSAMU

1988-02-24

Abstract -- PURPOSE:To effectively reduce internal loss and enhance efficiency, by forming a self-induction coil with superconducting substance. CONSTITUTION:A superconductive self-induction coil 22 is connected to spark discharge electrodes 16 and a rectifier 18 in series, and the series circuit and an electrostatic capacitor 12 are arranged in parallel with a DC power source 10 via a change-over switch 20. So far as the operation of this power supply circuit is concerned, first, the contact a of the change-over switch 20 is connected to a contact b1, and the

electrostatic capacitor 12 is charged with the DC power source 10, and after that, by switching the contact a to a contact b3, the energy of the electrostatic capacitor 12 is sparkdischarged by the spark discharge electrodes 16 via the rectifier 18, and pulse-like current is fed to the coil 22.; By this current, a reverse-electromotive force is generated in the coil 22. By the superconduction of the coil 22, the resistance component of the circuit is reduced, and at the electrostatic capacitor 12, reverse-charging voltage approximating to 100 % of the initial charging voltage can be obtained.

FIG. 1

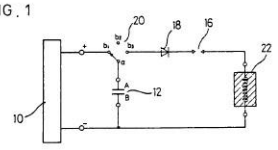


FIG. 2

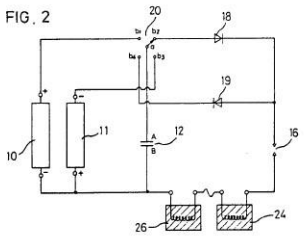


FIG. 3

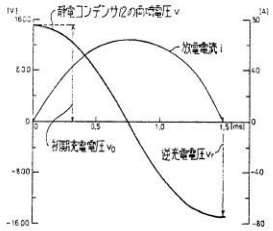


FIG. 4

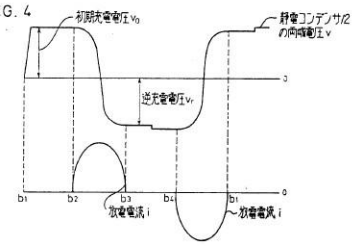


FIG. 5

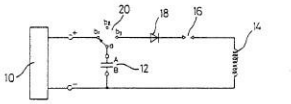
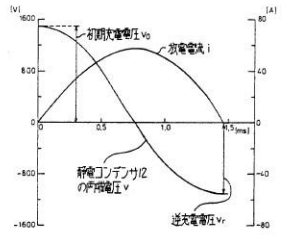


FIG. 6



JP2004303637

DISCHARGE GAP STRUCTURE OF TESLA COIL

Inventor: IDE OSAMU ; HAMADA KOICHI
Applicant: NATURAL GROUP HONSHA KK
2004-10-28

JP2004103520
DISCHARGE ELECTRODE OF TESLA COIL AND TESLA COIL CONTAINING THE SAME

Inventor: IDE OSAMU
Applicant: NATURAL GROUP HONSHA KK
2004-04-02

JP2091906
ELECTROMAGNETIC COIL

Inventor: IDE OSAMU
Applicant: NACHIYURARU KK ; IDE OSAMU
1990-03-30

JP63069469
POWER SUPPLY FOR POWER

Inventor: IDE OSAMU
Applicant: HASHIMOTO YUKIO ; IDE OSAMU
1988-03-29

JP59162735

POWER SOURCE CIRCUIT OF SMALL-SIZED ELECTRONIC DEVICE

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1984-09-13

JP59162730

POWER SOURCE CIRCUIT OF SMALL-SIZED ELECTRONIC DEVICE

Inventor: IDE OSAMU

Applicant: SEIKO INSTR & ELECTRONICS

1984-09-13

JP59162734

POWER SOURCE CIRCUIT OF SMALL-SIZED ELECTRONIC DEVICE

Inventor: IDE OSAMU

Applicant: SEIKO INSTR & ELECTRONICS

1984-09-13

JP59162733
POWER SOURCE CIRCUIT OF SMALL-SIZED ELECTRONIC DEVICE
Inventor: IDE OSAMU
Applicant: SEIKO INSTR & ELECTRONICS
1984-09-13

Pavel IMRIS

Optical Electrostatic Generator

http://www.web-space.tv/free-energy/
http://www.web-space.tv/free-energy/PART58.pdf?PHPSESSID=ebed96bc26dfefbe928bae7ed9ca800d

Patrick Kelly's Notes

Pavel Imris was awarded a US patent in the 1970s. The patent is most interesting in that it describes a device which can have an output pwer which is more than nine times greater than the input power. He achieves this with a device that has two pointed electrodes enclosed in a quartz glass envelope which contains xenon gas under pressure (the higher the pressure, the greater the gain of the device) and a dielectric material...

The results from Test No. 24 where the gas pressure is a very high 5,000 torr, that the input power for each 40-watt standard fluorescent tubes is 0.9 watts for full lmap poutput. In other words, each lamp is working to its full specification on less than one-fortieth of its rated input power. However, the power taken by the device in that test was 333.4 watts which with the 90 watts needed to run the 100 lamps, gives a total input electrical power of 423.4 watts instead of the 4,000 watts which would have been needed without the device. that is an output power of more than nine times the input power.

From the point of view of any individual lamp, without using this device, it requires 40 watts of electrical input power to give 8.8 watts of light output which is an efficiency of about 22% (the rest of the input power being converted to heat). In test 24, the input power per lamp is 0.9 watts for the 8.8 watts of light produced, which is a lmap efficiency of more than 900%. the lamp used to need 40 watts of input pwer to perform correctly. With this device in the circuit, each lamp only needs 0.9 watts of input power which is only 2.25% of the original power. Quite an impressive performance for so simple a device!

KeelyNet

Scalar Light Bulb

From: Mark Jordan
Date: Fri, 22 Jul 2005

You might also be interested in knowing about the Imris' circuit (US Patent # 3,781,601).

http://tinyurl.com/9fc9f

"An optical generator of an electrostatic field at light frequencies for use in an electrical circuit, said generator having a pair of spaced apart electrodes in a gas-filled tube of quartz glass or similar material with at least one condenser cap or plate adjacent one electrode and a dielectric-filled container enclosing the tube, the generator substantially increasing the electrical efficiency of the electrical circuit. . . .

An optical electrostatic generator which is effective for producing high frequencies in the visible light range of about 10^14 to 10^23 Hz. . . .

The present optical electrostatic generator does not perform in accordance with the accepted norms and standards of ordinary electromagnetic frequencies.

The device can be used in a flourescent lighting circuit, with motors, flash lamps, high speed controls, laser beams, high energy pulses, electrostatic particle precipitation, chemical synthesis (such as ozone generation), and charging means for high voltage generators of the VandeGraph type, as well as particle accelerators. . .

The device removes the component of electricity which produces heat."

For flourescent lighting, Imris shorted the pins on the ends of the tubes, indicating that the filaments are not used, or necessary.

At higher pressures, the device becomes Over Unity. For instance, with a Xenon filled tube at 5,000 torr in a series circuit with 100 40 Watt flouresent lamps (with a single wire going to each end of each lamp), the optical generator pulls 332 Watts, with each lamp pulling 9 tenths Watt (at 5 Volts) for 3,200 lumens output (8.8 Watts) per tube - giving a total for the circuit of 880 Watts output for 442 Watts input.

US Patent # 3,781,601
Canadian Patent # 951836

Optical Generator of an Electrostatic Field having Longitudinal Oscillations at Light Frequencies for Use in an Electrical Circuit

7-23-1974

Pavel IMRIS

An optical generator of an electrostatic field at light frequencies for use in an electrical circuit, having generator having a pair of spaced apart electrodes in a gas-filled tibe of quartz glass or similar material with at least one condenser cap or plate adjacent one electrode and a dielectric-filled container enclosing the tube, the generator substantially increasing the electrical efficiency of the electrical circuit.

The present optical electrostatic generator does not perform in accordance with the accepted norms and standards of ordinary electromagnetic frequencies.

The optical electrostatic generator as utilized in the present invention can generate a wide range of frequencies between several Hertz and those in the light frequency. Accordingly, it is an object of the present invention to provide improved electrical energy circuits utilizing my optical electrostatic generator whereby the output energy in the desired form will be substantially more efficient than heretofore possible with standard circuit techniques and equipment. It is a further object of the present invention to provide such a circuit for use in fluorescent lighting or other lighting circuits. It is also an object of the present invention to provide a circuit for use in fluorescent lighting or other lighting circuits. It is also an object of the present invention to provide a circuit which may be utilized in conjunction with electrostatic precipitators for dust and particle collection and removal, as well as many other purposes which will be apparent to those skilled in the art as set forth hereinafter.

Figure 1 is a schematic layout showing an optical electrostatic generator of the present invention utilized in a lighting circuit for fluorescent lamps;

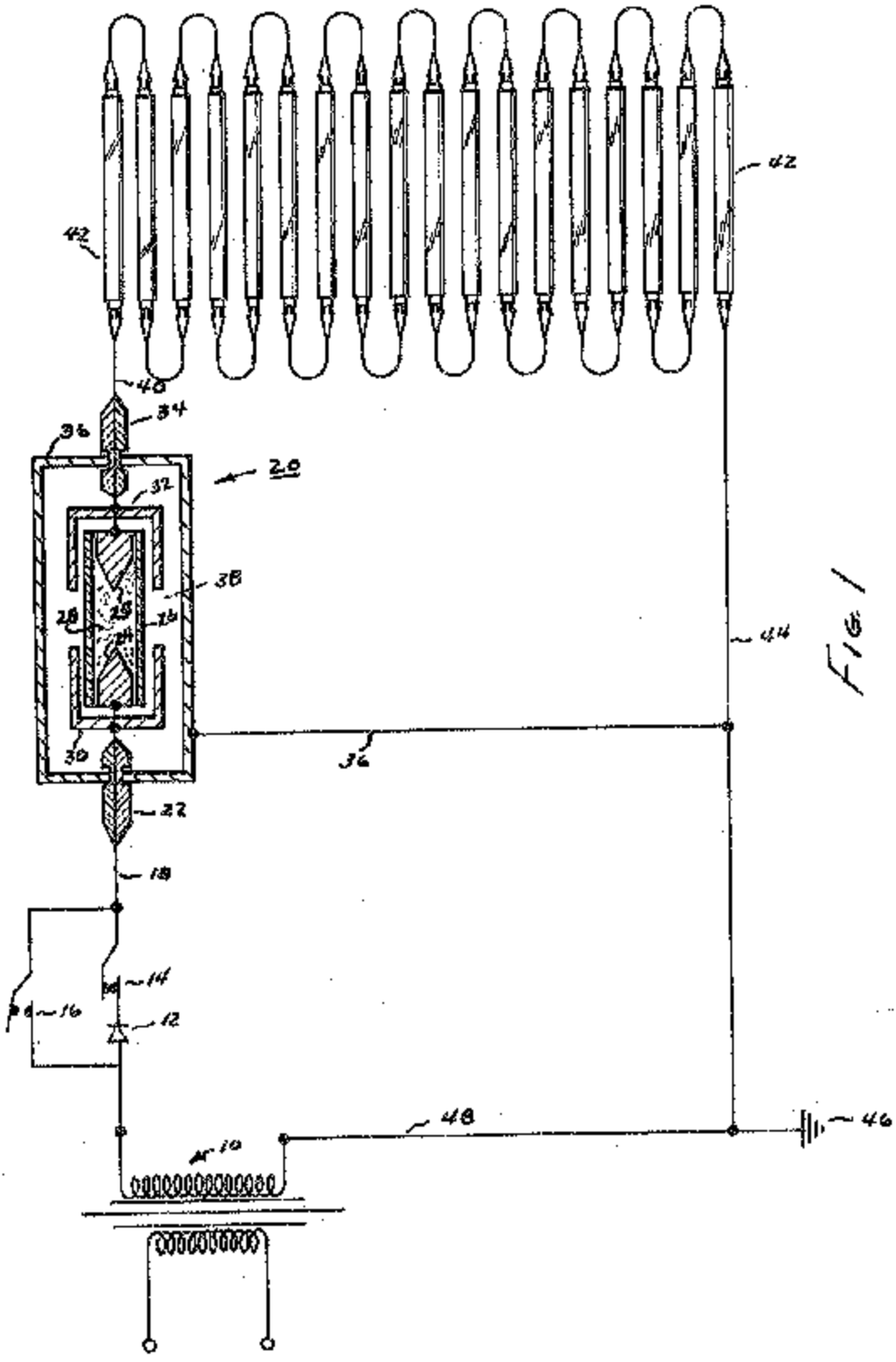


FIG 1

Figure 2 is a schematic layout of a high voltage circuit incorporating an optical electrostatic generator; and

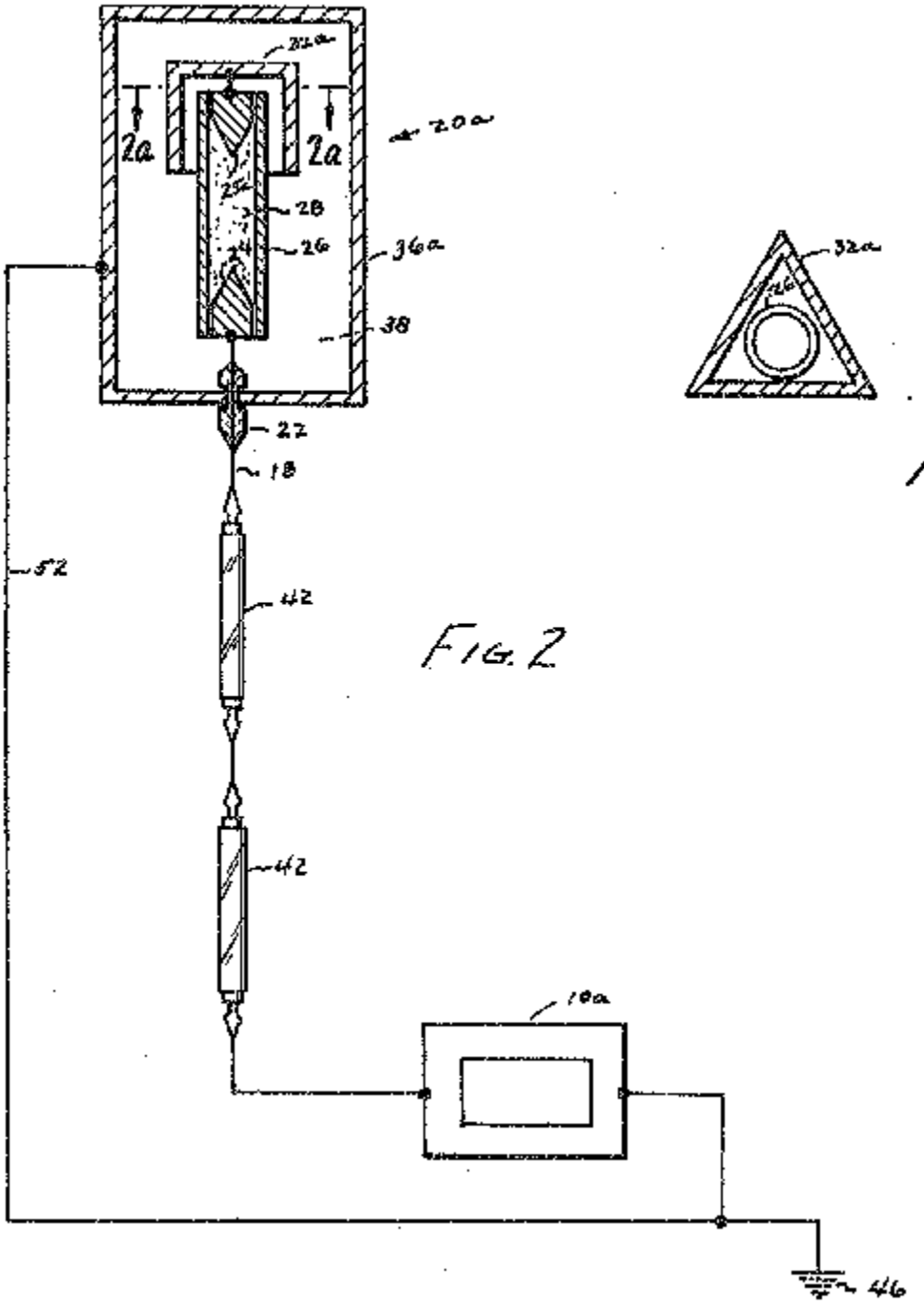
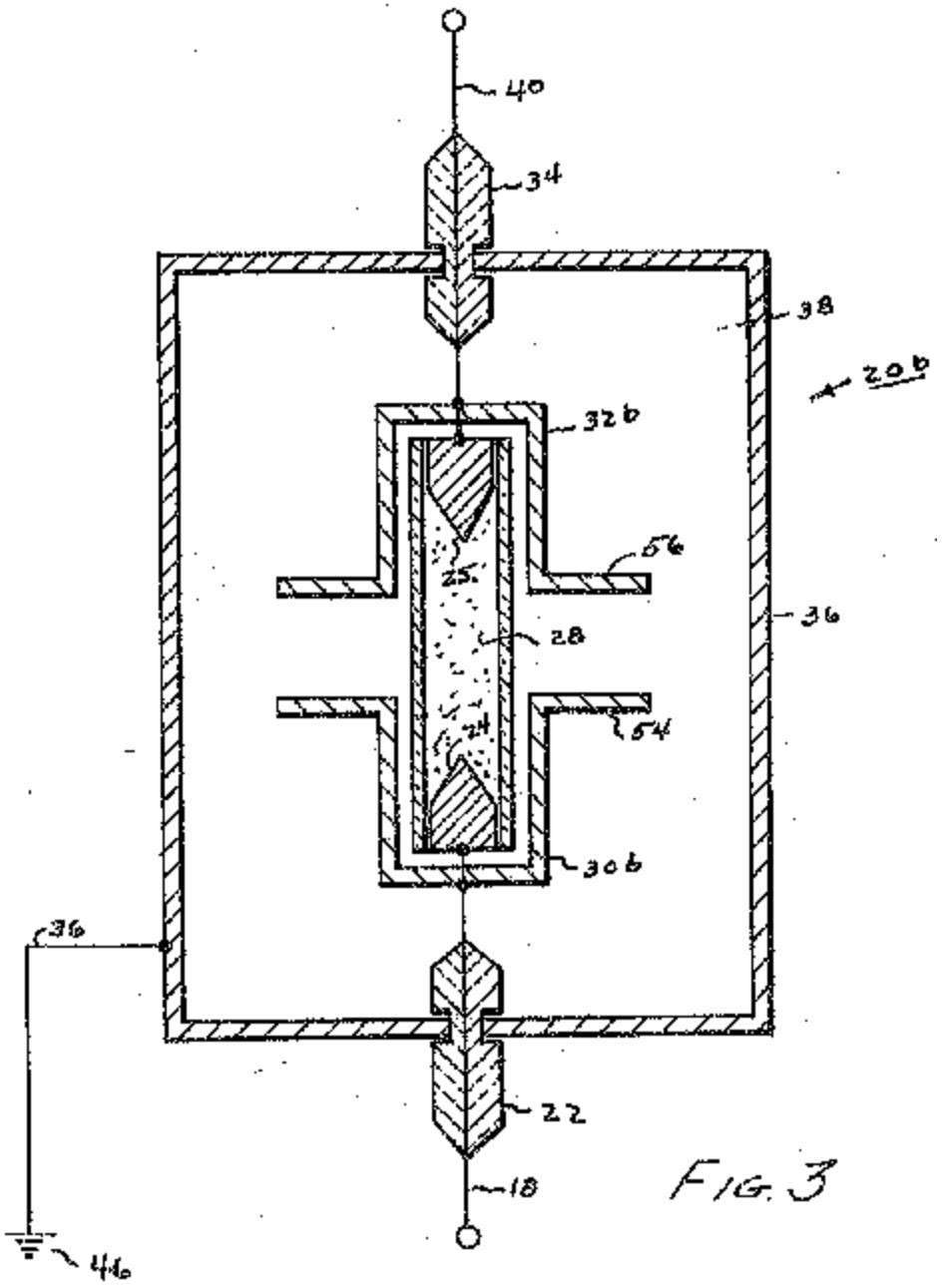


FIG. 2a

FIG. 2

Figure 3 is a schematic sectional view showing an optical electrostatic generator in accordance with the present invention particularly for use in alternating current circuits, although it may also be used in direct current circuits.



Description of the Illustrated Embodiments

Referring to the drawings and to Figure 1 in particular, a low voltage circuit utilizing an optical electrostatic generator in accordance with the present invention is shown. As shown in Figure 1, a source of alternating current electrical energy 10 is connected to a lighting circuit. Connected to one tap of the power source 10 is a rectifier 12 for utilization when direct current is required. The illustrated circuit is [provided with a switch 14 which may be opened or closed depending upon whether or not direct or alternating current is desired. A switch 16 is provided and closed when the circuit requires alternating current, in which case switch 14 is open. When switch 16 is open and 14 is closed, the circuit is operating as a direct current circuit.

Extending from the switches 14 and 16 is a conductor 18 which is connected to an optical electrostatic generator 20 in accordance with the present invention. The conductor 18 is passed through an insulator 22 and connected to an electrode 24. Spaced from the electrode 24 is a second electrode 25. Enclosing the electrodes 24 and 25, which preferably are of tungsten metal or similar materials, is a quartz glass tube 26 which is filled with an ionizable gas 28 such as xenon. The gas may be of any other suitable ionizable gas such as argon, krypton, neon, nitrogen or hydrogen, as well as the vapor of metals such as mercury or sodium.

Surrounding each end of the tube 26 and adjacent to each electrode 24 and 25 are condenser plates 30 and 32 in the form of caps. A conductor is connected to electrode 25 and passed through a second insulator 34. Surrounding the tube, electrodes and condenser caps is a metal envelope in the form of a thin sheet of copper or other metal such as aluminum. The envelope 36 is spaced from the conductors leading into and out of the generator by means of the insulators 22 and 34. The envelope 36 is filled with a dielectric material such as transformer oil, highly purified distilled water, nitrobenzene or any other suitable liquid dielectric. In addition, the dielectric may be a solid such as ceramic material with relatively small molecules.

A conductor 40 is connected to electrode 25, passed through insulator 34 and then connected to a series of fluorescent lamps 42 which are arranged in series connection. It is the lamps 42 which will be the measure of the efficiency of the circuit containing the optical electrostatic generator 20. A conductor 44 completes the circuit from the fluorescent lamps to the tap of the source of the electrical energy 10. In addition, the circuit is connected to a ground 46 by means of another conductor 48. The envelope 36 is also grounded by lead 50 and in the illustrated diagram lead 50 is connected to the conductor 44.

The condenser caps or plates 30 and 32 form what will be called in this specification a ‘relative condenser’ with the discharge tube.

There is an oscillation effect between the ionized gas in the discharge lamp and the metallic envelope 36 forming what shall be called an ‘absolute condenser’ in this specification. The oscillation effect between the ionized gas and the envelope 36 will be present if the condenser caps are eliminated but the efficiency of the electrostatic generator will substantially decreased.

The face of the electrode can be any desired shape. However, a conical point of 60 degrees has been found to be satisfactory and it is believed to have an influence on the efficiency of the generator.

In addition, the type of gas selected for use in the tube 26 as wall as the pressure of the gas in the tube also effect the efficiency of the generator, and, in turn, the efficiency of electrical circuit.

To demonstrate the increased efficiency of an electrical circuit utilizing the optical electrostatic generator of the present invention as well as the relationship between gas pressure and electrical efficiency, a circuit similar to that shown in Figure 1 may be used with 100 standard 40 watt, cool-white fluorescent lamps arranged in series. The optical electrostatic generator includes a quartz glass tube filled in with xenon, with series of different tubes being used because of the different pressures tested.

Set forth in Table I is the data obtained relating to the optical electrostatic generator. In Table II the lamp performance and efficiency for each of the tests set forth in Table I is shown. The following is a description of the data set forth in each of the columns of the Tables I and II.

Column // Description
B // Gas used in discharge tube
C // Gas pressure in tube in torrs
D // Field strength across the tube measured in volts per cm of length between the electrodes
E // Current density measured in microamps per square mm of tube cross sectional area
F // Current measured in amps
G // Power across the tube, calculated in watts per cm of length between the electrodes
H // Voltage per lamp, measured in volts
K // Current measured in amps
L // Resistance calculated
M // Input power per lamp, calculated in watts
N // Light output, measured in lumens

Table I

TABLE I

	OPTICAL GENERATOR SECTION					
	B	C	D	E	F	G
TEST NO.	TYPE OF DISCHARGE LAMP	PRESSURE OF Xe Torr	FIELD STR. ACROSS LAMP V/cm	CURRENT DENSITY μA/mm^2	CURRENT A	POWER STR. ACROSS LAMP W/cm
1	No elec.	ø	ø	ø	ø	ø
2	Xe	0.01	11.8	353	0.1818	2.14
3	Xe	0.10	19.6	353	0.1818	3.57
4	Xe	1.00	31.4	353	0.1818	5.72
5	Xe	10.00	47.2	353	0.1818	8.58
6	Xe	20.00	55.1	353	0.1818	10.02
7	Xe	30.00	62.9	353	0.1818	11.45
8	Xe	40.00	66.9	353	0.1818	12.16
9	Xe	60.00	70.8	353	0.1818	12.88
10	Xe	80.00	76.7	353	0.1818	13.95
11	Xe	100.00	78.7	353	0.1818	14.31
12	Xe	200.00	90.5	353	0.1818	16.46
13	Xe	300.00	100.4	353	0.1818	18.25
14	Xe	400.00	106.3	353	0.1818	19.32
15	Xe	500.00	110.2	353	0.1818	20.04
16	Xe	600.00	118.1	353	0.1818	21.47
17	Xe	700.00	120.0	353	0.1818	21.83
18	Xe	800.00	122.8	353	0.1818	22.33
19	Xe	900.00	125.9	353	0.1818	22.90
20	Xe	1,000.00	127.9	353	0.1818	23.26
21	Xe	2,000.00	149.6	353	0.1818	27.19
22	Xe	3,000.00	161.4	353	0.1818	29.35
23	Xe	4,000.00	173.2	353	0.1818	31.49
24	Xe	5,000.00	179.1	353	0.1818	32.56

Table II

TABLE II

	FLUORESCENT LAMP SECTION				
	H	K	L	M	N
TEST NO.	VOLTAGE	CURRENT	RESISTANCE	INPUT ENERGY	LIGHT OUTPUT
	V	A	Ω	W	Lumen
1	220	0.1818	1,210	40.00	3,200
2	218	0.1818	1,199	39.63	3,200
3	215	0.1818	1,182	39.08	3,200
4	210	0.1818	1,155	38.17	3,200
5	200	0.1818	1,100	36.36	3,200
6	195	0.1818	1,072	35.45	3,200
7	190	0.1818	1,045	34.54	3,200
8	182	0.1818	1,001	33.08	3,200
9	175	0.1818	962	31.81	3,200
10	162	0.1818	891	29.45	3,200
11	155	0.1818	852	28.17	3,200
12	130	0.1818	715	23.63	3,200
13	112	0.1818	616	20.36	3,200
14	100	0.1818	550	18.18	3,200
15	85	0.1818	467	15.45	3,200
16	75	0.1818	412	13.63	3,200
17	67	0.1818	368	12.18	3,200
18	60	0.1818	330	10.90	3,200
19	53	0.1818	291	9.63	3,200
20	50	0.1818	275	9.09	3,200
21	23	0.1818	126	4.18	3,200
22	13	0.1818	71	2.35	3,200
23	8	0.1818	44	1.45	3,200
24	5	0.1818	27	0.90	3,200

The design of the tube construction for use in the optical electrostatic generator of the type used in Figure 1 may be accomplished by means of considering the radius of the tube, the length between the electrodes in the tube and the power across the tube.

If we let R be the minimum inside radius of the tube in centimeters, L the minimum length in centimeters between the electrodes, and W the power in watts across the lamp the following formula may be obtained from Table I:

R = Current [A] / Current Density [A / mm^2] / 3.14

L = 8R

W = L (V / cm) A

For example. For Test No. 18 in Table I, the current is 0.1818 A (column F), the current density 0.000353 A/mm^2 (column E), and the voltage distribution is 122.8 V/cm (column D); therefore

R = 0.1818A / 0.000353 A/mm^2 / 3.14

L = (12.80 mm) (8) = 102.4 mm or 10.2 cm

W = (10.2 cm) (122.8 V/cm) (0.1818 A) = 227.7 VA or 227.7 Watts

The percent efficiency of operation of the fluorescent lamps in Test No. 18 can be calculated from the following equation:

% Eff. = (Output Energy) / (Input Energy) x (100)

Across a single fluorescent lamp, the voltage is 60 V and the current is 0.1818 A; therefore, the input energy to the lamp 42 is 10.90 W. The output of the fluorescent lamp is 3,200 lumens which represent 8.8 W power of light energy. Thus, one fluorescent lamp is operating at 80.7% efficiency under these conditions.

However, when the optical generator is the same as described for Test No. 18 and there are 100 fluorescent lamps in series in the circuit, the total power input is 227.7 watts for the optical electrostatic generator and 1.000 watts for 100 fluorescent lamps or a total of 1,318 watts. The total power input normally to operate the 100 fluorescent lamps in a normal circuit would be 40 watts tie 100 or 4,000 watts. Thus, by using the optical generator in the circuit, about 2,680 watts of energy are saved.

Table I is an example of the functioning of this invention for a particular fluorescent lamp (40 watt, cool-white), however, similar data can be obtained for other lighting applications by those skilled in the art.

In Figure II a circuit is shown using an optical electrostatic generator 20a similar to generator 20 of Figure 1. In generator 20 only one condenser cap 32a is used and it is preferably of triangular cross-sectional design. In addition, the second electrode 25a is connected directly by a conductor back into the return conductor 52.

This arrangement is preferably for very high voltage circuits and the generator is particularly suited for direct current usage.

In Figure 2, common elements have received the same number indicators as in Figure 1.

In Figure 3, still another embodiment of an optical electrostatic generator 20b is shown. This generator is particularly suited for use with alternating current circuits. In this embodiment the condenser plates 30b and 32b have flanges 54 and 56 extending outwardly towards the envelope 36. While the utilization of the optical electrostatic generator has been described in use in a fluorescent lighting circuit, it is to be understood that many other types of circuits may be used. For example, the high voltage embodiment may be useable in a variety of circuits such as flash lamps, high speed controls, laser beams, and high energy pulses. The generator is also particularly useable in a circuit including electrostatic particle precipitation in air pollution control devices, chemical synthesis in electrical discharge systems such as ozone generators, and charging means for high voltage generators of the Van de Graff type, as well as particle accelerators.

To those skilled in the art many other uses and circuits will be apparent.

Pavel Imris' Patents

HIGH FREQUENCY GENERATOR AND METHOD OF USING RADIATION OF ENERGY FROM EXCITED AND METASTABLE ATOMS OF A PLASMA
CA980880
1975-12-30

ELECTRIC GENERATOR HAVING HELICAL FERROMAGNETIC BAND ON THE ROTOR SURFACE
CA954924
1974-09-17

OPTICAL GENERATOR OF AN ELECTROSTATIC FIELD HAVING LONGITUDINAL OSCILLATIONS AT LIGHT FREQUENCIES FOR USE IN AN ELECTRICAL CIRCUIT
CA951836
1974-07-23

METHOD AND DEVICE FOR THE DESALINATION OF IN PARTICULAR SEAWATER WITH THE AID OF ALTERNATING FIELDS OF IDENTICAL FREQUENCIES
WO2006039873
2006-04-20

Electric motor
EP1489722
2004-12-22

Compressed air motor
DE10311773
2004-09-30

Transformer with capacitive resistor for operating with high inductivity consists of a low-retentivity magnet core with primary and secondary windings fitted around it.
DE19927355
2000-12-21

Pendulum with magnetic drive driven by changing direction of magnetic flow between two permanent magnets and two ferrous disks
DE19915787
2000-10-12

Apparatus to create electrical energy from low temperture heat
EP0943789
1999-09-22

Einrichtung zur Umwandlung von Niedertemperaturwärme in elektrische Energie
DE59910874D
2004-11-25

DEVICE FOR TRANSFORMATION OF ENERGY LOCATED IN MAGNETIC FIELD TO KINETIC ENERGY
SK89594
1995-05-10

DEVICE FOR CONVERSION OF MAGNETIC FIELD ENERGY TO KINETIC ENERGY
CZ9401781
1995-03-15

Flywheel with adjustable mass inertia torque - has flywheel arm on rotor shaft with circulating mass fitted to flywheel at distance from rotor
DE4114870
1992-04-30

LAMP WITH LIGHTING COATING
HU53731
1990-11-28

LEUCHTSTOFFLAMPE
DE59000175D
1992-07-30

LEUCHTSTOFFLAMPE
AT77712T
1992-07-15

Method and device for measuring the conversion of kinetic into potential energy and vice versa
DE3837723
1990-05-10

Rim, in particular for the wheels of passenger cars
DE3715266
1988-11-24

Wind turbine
DE3715265
1988-11-24

Anti-skid device
DE3715264
1988-11-24

Method and device for producing (generating) electromagnetic pulses
DE3706385
1988-09-08

Apparatus for producing and controlling harmonic pulses
DE3503411
1986-08-07

Appliance for the controlled generation of gas pressure waves
DE3425068
1986-02-06

Device for producing and controlling oscillations
DE3407798
1985-09-12

Device for generating and controlling beats
DE3339074
1985-05-15

Device for generating or controlling damped oscillations
DE3331058
1985-03-14

Method and device for producing electrical discharges
GB2122026
1984-01-04

Device for generating and controlling circularly polarised oscillations
DE3247649
1984-06-28

Device for producing or controlling oscillations
DE3228899
1984-04-05

Device for generating and controlling non-harmonic oscillations
DE3139983
1983-04-28

APPARATUS FOR THE PRODUCTION OF OZONE
NO781847
1978-11-29

Device for the production of ozone
US4152603
1979-05-01

Appts. for prodn. of ozone from air or oxygen
DE2724428
1978-11-30

DISPOSITIF POUR LA PRODUCTION D'OZONE
NO763033
1977-03-08

GENERATRICE ELECTRIQUE
FI49230B
1974-12-31

VERFAHREN UND VORRICHTUNG ZUR ERZEUGUNG VON HOCHFREQUENZIMPULSEN
DE2218592
1973-10-18

No English title available
DE2165249
1973-02-15

Electrostatic precipitator - uses plasma of metastable ions to achieve high precipitation
DE2151220
1973-04-19

Purification of a gas stream
DE1940642
1970-10-01

Ezekiel IZUOGU

Self-Sustaining Emagnetodynamic Machine

http://allafrica.com/stories/201006070641.html
7 June 2010

Nigeria: Izuogu Invents New Tool to End Energy Crisis

by

Achilleus-Chud Uchegbu

The new invention will offer uninterrupted power supply at no cost, says the inventor.

This was the view expressed by most of those who attended an investor's dinner in Abuja where the invention was presented and demonstrated.

The invention called Self-Sustaining Emagnetodynamics Machine, according to the inventor, Izuogu, was made possible after over 30 years of research and work.

Already, the machine has received patents from 104 countries and is recognized by the World Intellectual Property Organization (WIPO).

Presenting it to the investors at the dinner which included former Vice-President Alex Ekwueme, Senator Osita Izunaso, Gen. Chris Garuba (Rtd), Alhaji Alani Bankole, Prof Peter Onwualu who is Director-General of Raw Material Research and Development Council (RMRDC), Izuogu said the machine is capable of generating as much megawatt of electricity as could power Nigeria.

"We are here today to announce to you that this machine can give uninterruptible electricity power supply to our nation and because it uses no input energy to operate, government can indeed make Nigerians pay nothing for electricity."

He said that the new invention, when fully installed, would also eliminate running cost as it is self-sustaining and needs no diesel or petrol to power it.

The machine, he said, became possible after turning the two laws of emagnetodynamics into interpretable work.

"We are here today because some 33 years ago, while I worked as a missionary itinerant evangelist of the gospel in Benin City, the Almighty God gave me a vision of a machine that could help solve the energy problems of the world. Right there in 1980, I received the two laws of emagnetodynamics.

"By June 5, 1982 I had succeeded in turning these two laws into a working machine. It was very exciting but because of the frightening and intimidating effects of the well known science laws, I was scared to publish my findings. I wished to work more and prove these things very well. So, I worked for another 27 years before I approached the World Intellectual Property Organisation for a patent.

"Under the direction of the WIPO, patents for this invention have now been filed in 104 nations of the world," he said.

Describing the machine, WIPO said "the self-sustaining emagnetodynamics machine utilizes a theory that is different from the age old theory on which electric motors have been built for over five hundred [sic] years since the days of the great inventor and scientist, Michael Faraday."

WIPO said: "The present invention is a magnet motor that utilizes the inventor's first and second laws of emagnetodynamics as well as the inventor's horse orientation theory of magnetism."

It said, "the critical feature of this machine is that it is distinguishable from earlier invention of the non self sustaining emagnetodynamics machine in that the self-sustaining machine generates a feedback current which provides release from the backlash stators and therefore the machine is able to run without any external source of energy."

THE SELF-SUSTAINING EMAGNETODYAMICS MACHINE

Inventor DR EZEKIEL 0 IZUOGU
Citizenship NIGERIA
Residence HOUSE 8 ROAD 6922, GWARIMPA, ABUJA

BACKGROUND OF THE INVENTION

The present invention is in the technical field of PHYSICS

More particularly, the present invention is in the technical field of ENERGY.

The prior art in such technical field includes:

THE ELECTRIC OR BATTERY OPERATED EMAGNETODYNAMICS MOTOR, THEORY OF MAGNETISM AND THE THEORY OF FORCE EXERTED ON A CURRENT-CARRYING CONDUCTOR IN A MAGNETIC FIELD.

FORCE IS EXERTED ON A CURRENT CARRYING CONDUCTOR IN A MAGNETIC FIELD THIS THEORY HAS BEEN EXPLOITED IN BUILDING THE ELECTRIC MOTOR WHICH IS A MACHINE THAT CONVERTS ELECTRICAL ENERGY TO MECHANICAL ENERGY THE EMAGNETODYNAMICS MOTOR WORKS ON A DIFFERENT THEORY, NAMELY THE LAWS OF EMAGNETODYNAMICS.

BRIEF SUMMARY OF THE INVENTION

The present invention is a MAGNET MOTOR, CALLED THE SELF-SUSTAINING EMAGNETODYNAMICS MACHINE THAT UTILISES THE INVENTOR'S FIRST AND SECOND LAWS OF EMAGNETODYNAMICS AS WELL AS THE INVENTOR'S HORSE ORIENTATION THEORY OF MAGNETISM

The first law states as follows:

A SUSPENDED COMPOSITE MAGNETIC POLE WILL ROTATE IN A CERTAIN DIRECTION IF PLACED IN THE VICINITY OF AN ARRAY OF LIKE POLES OF MAGNETS.

The second law states that:

THE DIRECTION OF ROTATION IS THAT OF THE COMPOSITE POLE SIMILAR TO THE ARRAY*

*(The inventor acknowledges the similarity between these laws and that of Faraday's discovery of the force exerted on a current-carrying conductor in a magnetic field. His knowledge of Faraday's work certainly inspired and guided him to establish similar laws for the movement of magnets without current-carrying conductors.)

THE CRITICAL FEATURE OF THIS MACHINE IS THAT IT IS DISTINGUISHABLE FROM THE EARLIER INVENTION OF THE NON SELF-SUSTAINING EMAGNETODYNAMICS MACHINE IN THAT THE SELF-SUSTAINING MACHINE GENERATES A FEEDBACK CURRENT WHICH PROVIDES RELEASE FROM THE BACKLASH STATORS AND THEREFORE THE MACHINE IS ABLE TO RUN WITHOUT ANY EXTERNAL SOURCE OF ENERGY WHILE AN ELECTRIC MOTOR CONVERTS ELECTRICAL ENERGY TO MAGNETIC ENERGY AND THEN CONVERTS MAGNETIC ENERGY TO MECHANICAL ENERGY, THE SELF-SUSTAINING EMAGNETODYNAMICS MOTOR, LIKE ITS NON-SELF-SUSTAINING COUNTERPART, CONVERTS AN INTERACTION OF MAGNETIC POLES DIRECTLY TO MECHANICAL ENERGY, WITHOUT GOING THROUGH THE INTERMEDIARY OF CURRENT-CARRYING CONDUCTORS

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

FIG. 1 IS A PERSPECTIVE VIEW OF THE COMPOSITE MAGNETIC POLE IT IS A CRESCENT SHAPED NORTH AND SOUTH POLES OF TWO PERMANENT MAGNETS HELD TOGETHER ON A BRASS OR COPPER, OR ANY NON-MAGNETIC PLATE BENT INTO THE CRESCENT SHAPE. It is mounted on a non magnetic pivoted spindle.

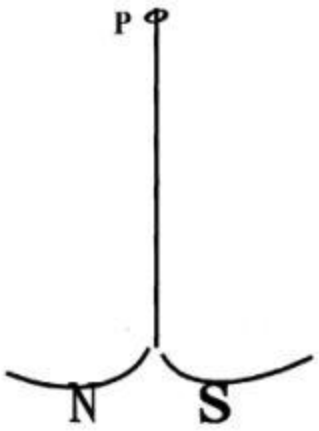


FIG.1: A COMPOSITE MAGNETIC POLE

FIG 2 shows an array of north poles of similar magnets (It could also have been South poles). However, similar poles must be used for the system to function.

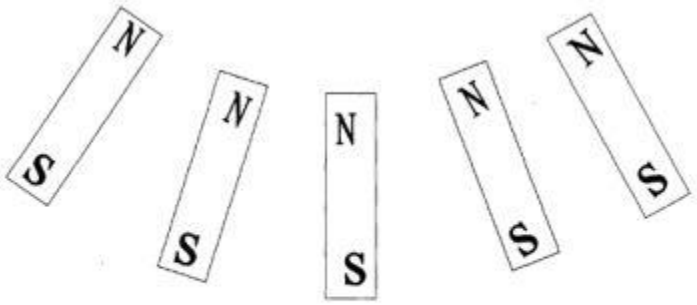


FIG.2: AN ARRAY OF NORTH POLES

FIG 3 shows the disposition of the magnetic poles of the magnets used to form the array of magnetic poles referred to in fig 2.

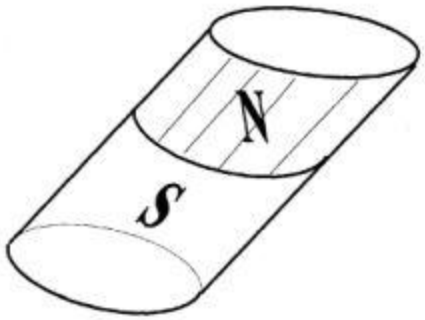
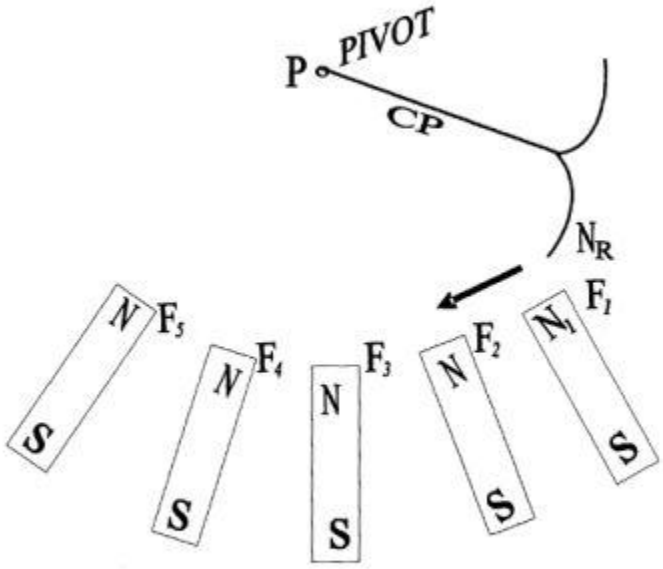


FIG.3:DISPOSITION OF MAGNETIC POLES

FIG 4 shows the composite magnetic pole placed in the vicinity of the array of like poles.



IG.4:COMPOSITE POLE IN THE VICINITY OF ARRAY

FIG 5 is a composite magnetic pole, but this time made of a slab of SOFT IRON core. It is mounted on a non magnetic, pivoted spindle.

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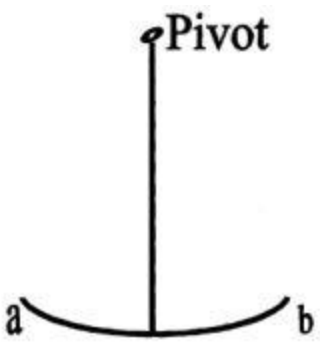

FIG.5: COMPOSITE MAGNETIC POLE MADE OF SOFT IRON SI

FIG 6 shows the angular disposition of the rotor vanes in each plane.

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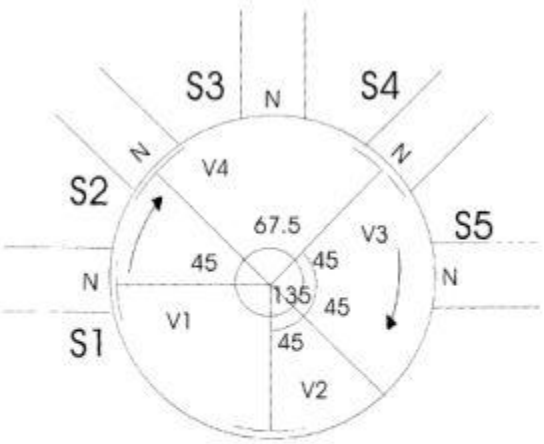

ANGULAR DISPOSITION OF ROTOR VANES IN 4 PLANE MACI

FIG 7 shows a design model of the complete SELF-SUSTAINING Emagnetodynamics motor, with four planes mounted.

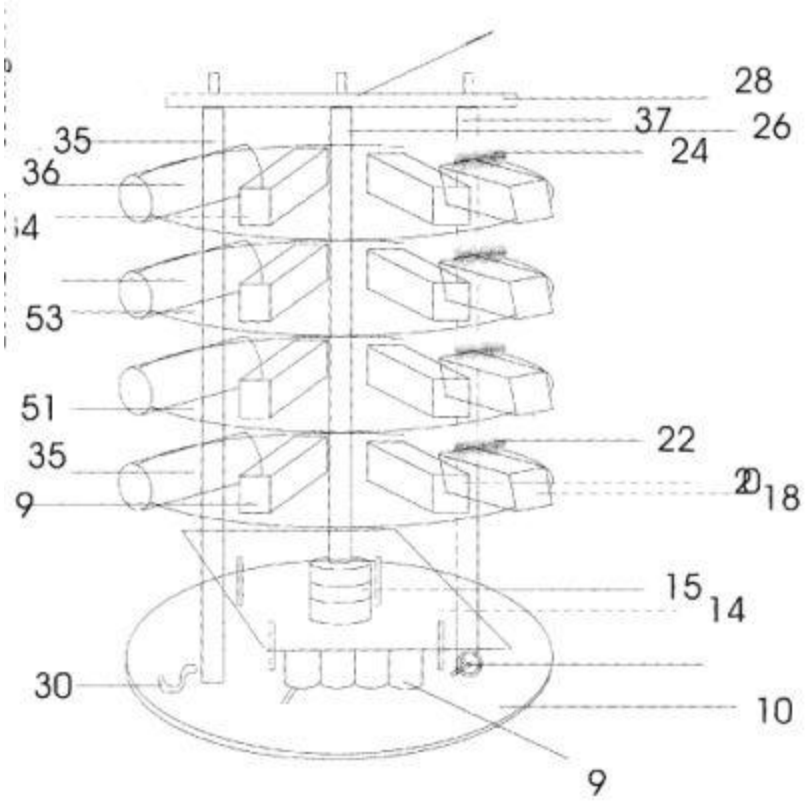

Fig.7:DESIGN MODEL OF THE SELF SUSTAINING MACHINE

FIG 8 shows the electrical connections for the machine shown in fig 7.

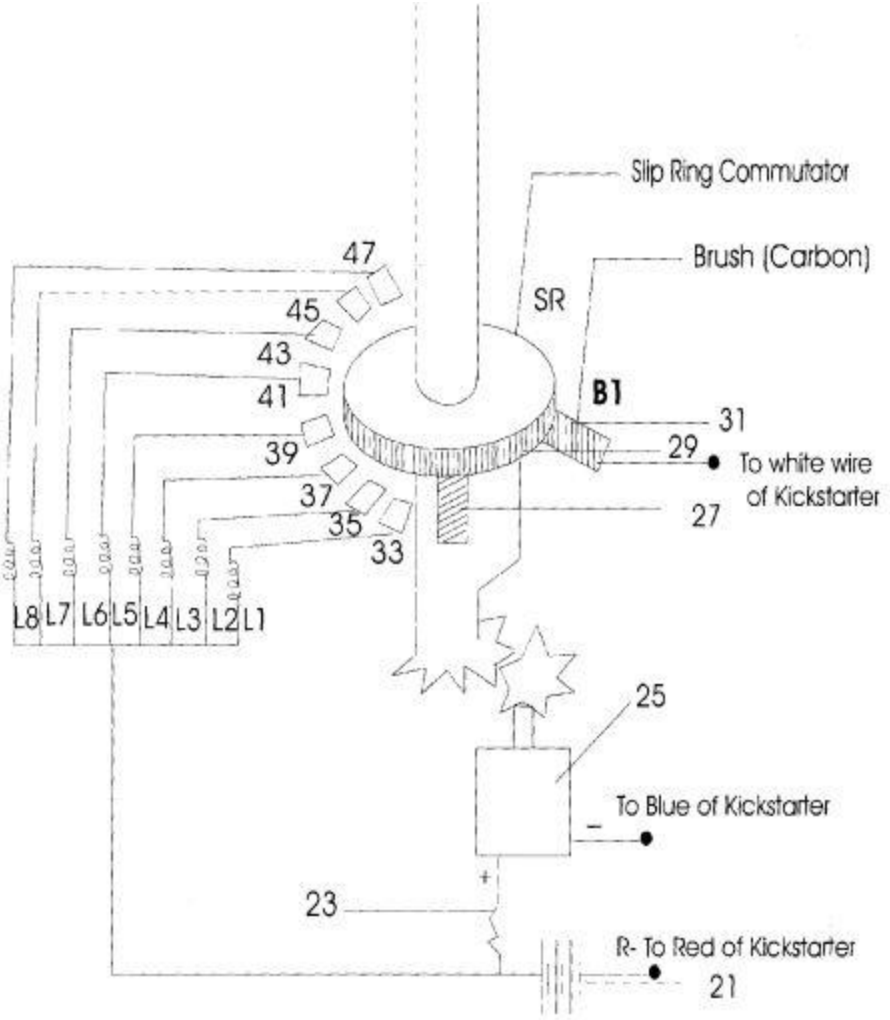

Fig. 8:Electrical connections for the machine

FIG 9 shows the rotor vane with its stem.

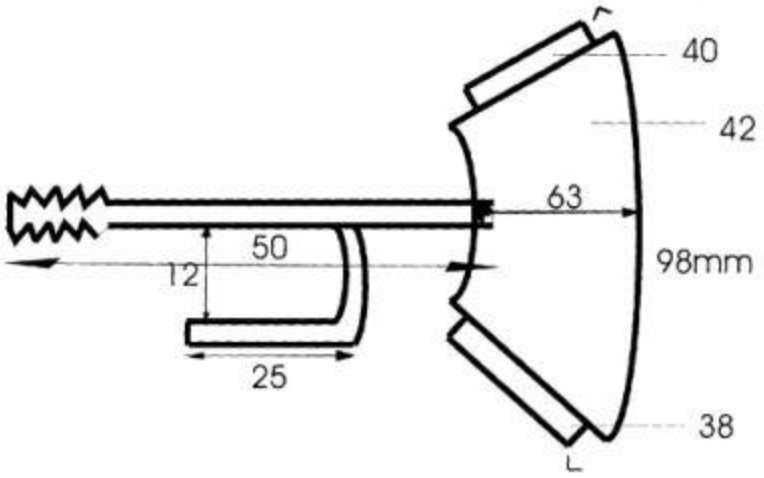

Fig. 9: ROTOR VANE WITH STEM

FIG 10 shows the permanent magnet that forms part of the composite polarity of the rotor It is a 60x15x5mm powerful ECLIPSE MAGNET bought from NAAFCO SCIENTIFIC, London. It gives an angle deflection of 15 degrees on a magnetometer placed some 300mm away.

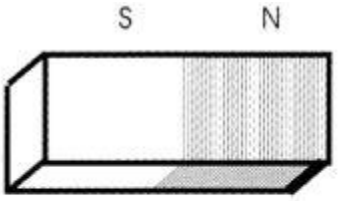

Fig. 10: Permanent Magnet for the composite Pole

FIG 11 shows the release electromagnets, 40, 42

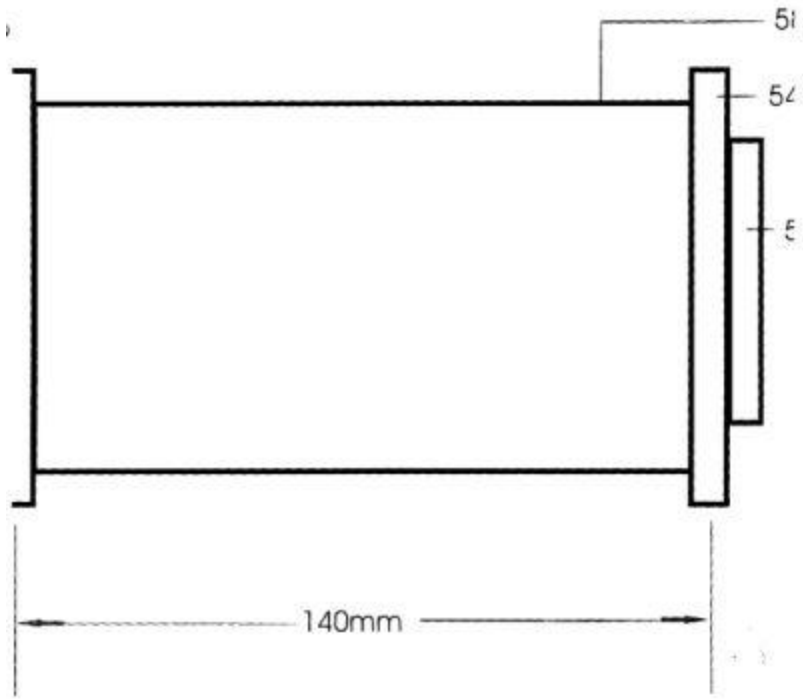

FIG.11: THE RELEASE ELECTROMAGNET

FIG 12 shows an unmagnetised bar of iron.

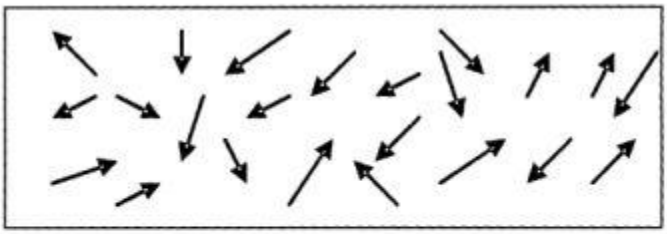

FIG.12: UNMAGNETISED BAR OF IRON

FIG 13 shows stators and vane on one plane.

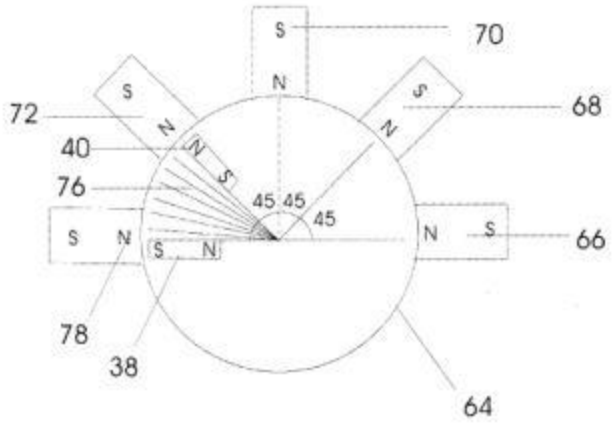

Fig13: STATORS AND VANE ON ONE PLANE

FIG 14 shows the same bar now inside a solenoid.

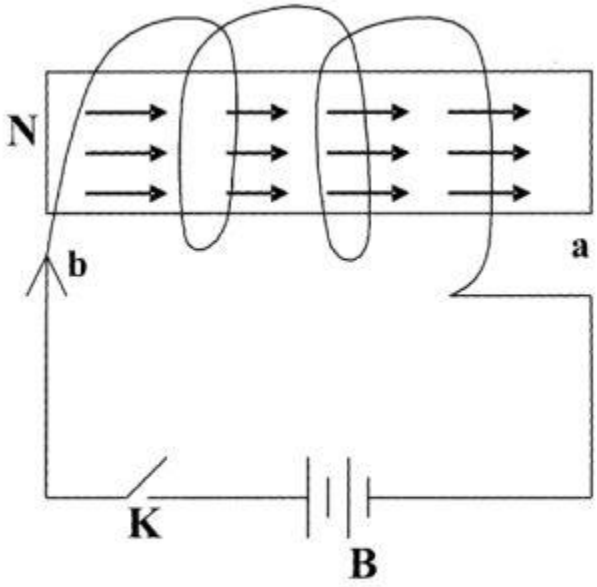

FIG.14: IRON BAR INSIDE A SOLENOID

FIG 15 shows the clutch yoke for the machine.

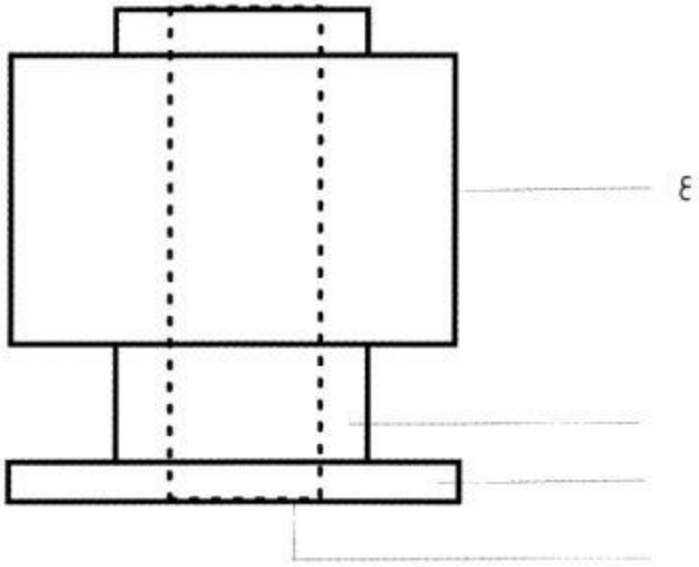

FIG. 15: THE CLUTCH YOKE FOR THE MACHINE

FIG 16 shows the clutch fork for the clutch assembly.

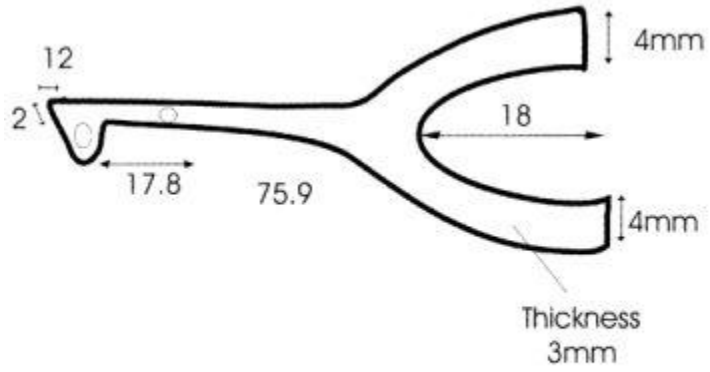

Fig. 16: THE CLUTCH FORK

FIG 17 shows the rotor for the machine.

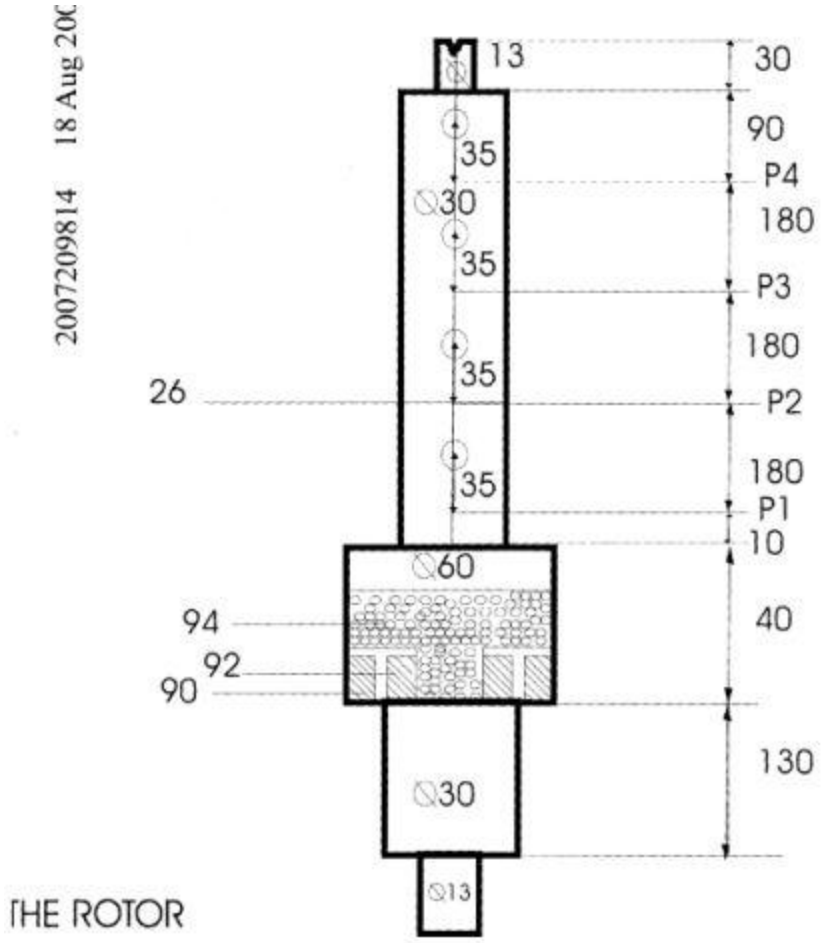

FIG 18 shows the clutch assembly.

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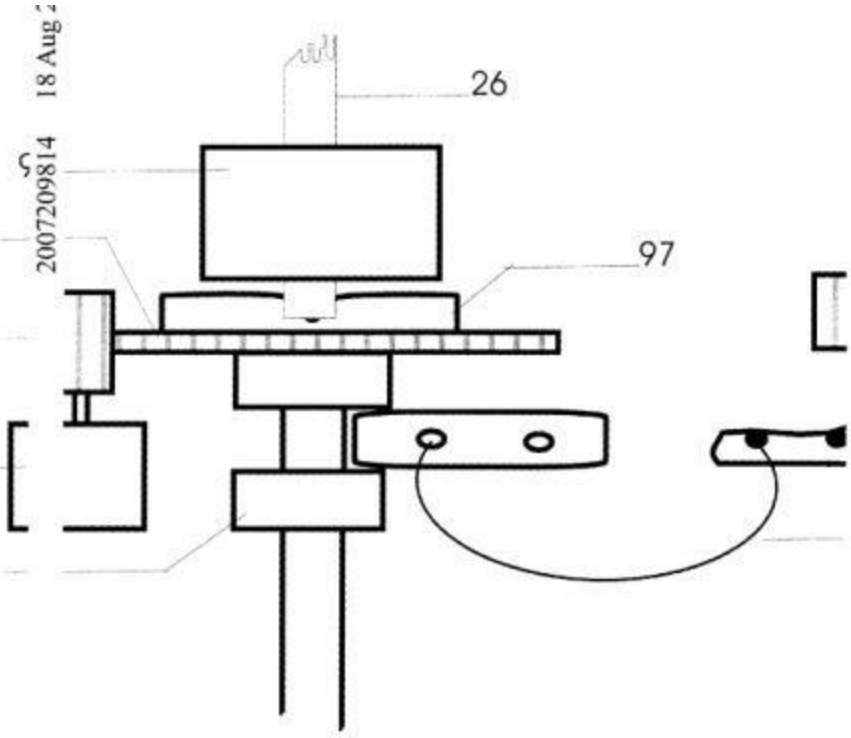

FIG:18: THE CLUTCH ASSEMBLY

FIG 19 shows five horses pulling in different directions.

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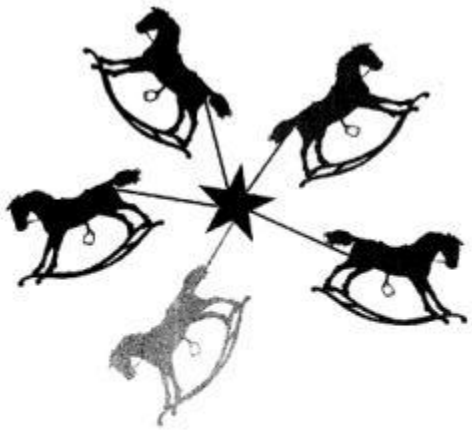

FIG.19: FIVE HORSES PULLING IN DIFFERENT DIRECTIONS

FIG 20 shows the five horses pulling in the same direction.

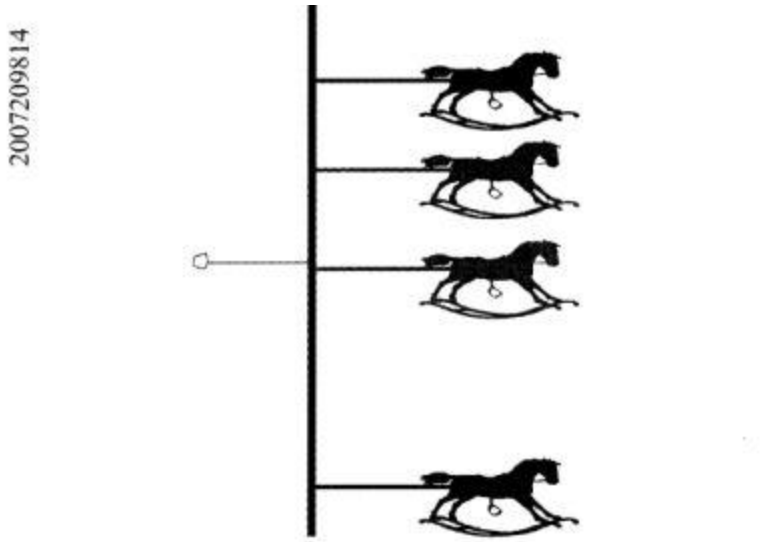

FIG.20: FIVE HORSES PULLING IN THE SAME DIRECTION

FIG 21 The machine with electromagnet stators giving mathematical and experimental proof that it achieves an efficiency of OVER UNITY.

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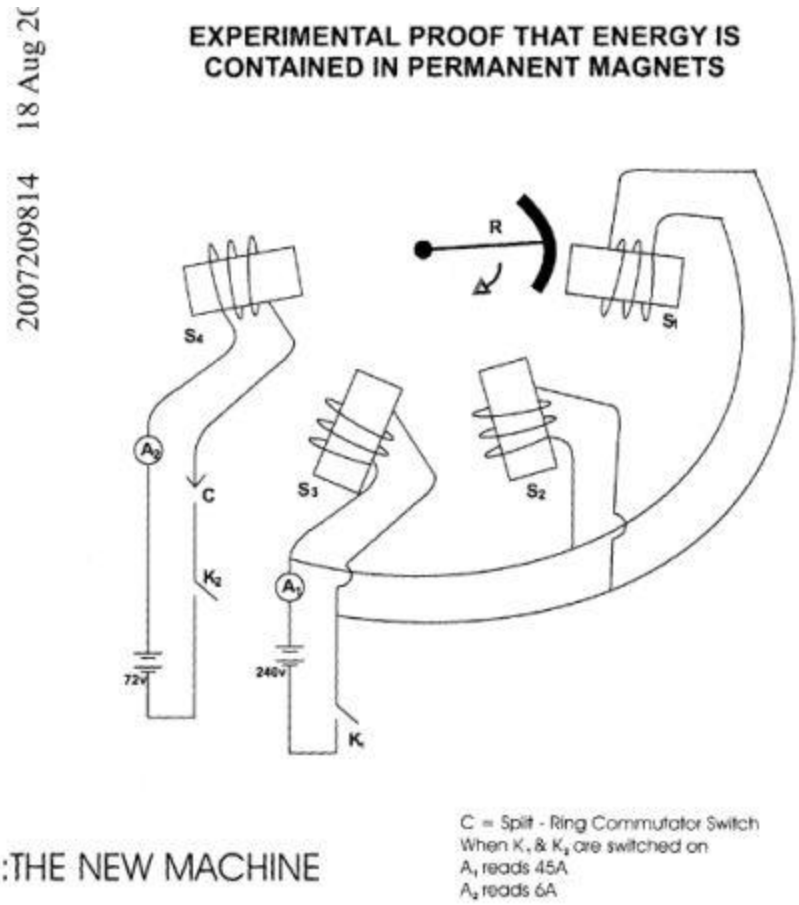

DETAILED DESCRIPTION OF THE INVENTION

FIG 7.

9, 11 -- Ball bearings at bottom and top, respectively,

10 -- Circular Brass plate which forms the base of the machine (Diameter 500mm, Thickness 10mm)

12 -- Ignition Key that switches on the machine (A typical motor car, e.g., Volkswagen car ignition key is adequate).

14 -- Group of feedback generators, serving also as KICKSTARTER.

15 -- A rectangular Perspex plate (180x180x5mm) that holds the carbon brushes

16 -- Slip ring commutators

18, 19 20 -- Permanent magnet stators of plane 1

22, 32 -- Release electromagnets for plane 1

24, 36 -- Release electromagnets for plane 4

30 -- Clutch pedal

26 -- Rotor shaft, brass, 30mm diameter

28 -- Rectangular plate of copper shackle

FIG 8 : THE ELECTRICAL CONNECTIONS

21 -- Motor battery, 12 volts d c

23 -- A resistance suitable to protect the feedback generator/kickstart motor

25 -- Kickstarter motor/feedback generator, 12 volt dc , rich in current

27 -- Distributor, copper,

29 -- slip ring copper commutators,

31 -- carbon brush

33, 35, 37, 39, 41, 43, 45, 47 -- carbon brushes to energise release electromagnets.

FIG 9 :

38, 40 -- Rectangular permanent magnets that form the composite pole O

42 -- The aluminium vane to hold the composite poles

50 -- The vane stem made of brass, length , diameter 10 mm

52 -- Vane stabilizer length 25 mm, diameter 5mm

FIG 11

JS 54 -- Aluminium former for release electromagnet, length 150 mm, internal diameter 37.2mm, external diameter 39mm, wound with 0.5mm diameter insulated copper wire having total resistance of 14 ohms.

56 -- Soft iron core for the electromagnet length 160mm, diameter 37mm

FIG 12 : An unmagnetised bar of soft iron

FIG 14 : Soft iron bar in a solenoid

FIG 13 : ONE PLANE SHOWING ANGULAR DISPOSITION OF STATORS

38 40 -- Rectangular permanent magnets that form the composite pole

66,74 -- Release electromagnets

68,70,72 -- Permanent magnet stators

76 -- Aluminium vane

FIG 15 : CLUTCH YOKE

82 -- Internal hole of diameter

84 -- Circular arm diameter and wide

86 -- Clutch shank outside diameter

88 -- Outer tube of outer diameter, mm long

FIG 16 : THE CLUTCH FORK

FIG 17 : THE BRASS ROTOR,870 mm, overall length

26 -- Smaller rotor stem, diameter 30mm

90 -- slip ring commutator,carry[iota]ng the distributor

92 -- The idle copper separator

FIG 18 : THE CLUTCH ASSEMBLY

29 84 94 -- As already described

26 -- Rotor shaft

96 -- Feedback generator,

98 -- Geared pully on generator,

100 -- Geared flywheel attached to rotor shaft

97 -- Clutch fiber attached to flywheel(made of leather material]

99 -- Clutch cable

FIG 19 : FIVE HORSES PULLING IN DIFFERENT DIRECTIONS

FIG 20 : FIVE HORSES PULLING IN THE SAME DIRECTION

(Illustration of the inventor s HORSE-ORIENTATION THEORY OF MAGNETISM)

Fig 21 : The machine, showing proof of OVER UNITY efficiency, mathematically.

Referring now to the invention in more detail, in FIG 1 to 21 there is shown the machine and its component parts. In particular in Fig 7 is shown the actual complete design of a four plane, self-sustaining, Emagnetodynamics machine with all components in place

Two rods of brass 35 37 (diameter 25mm, height 900mm) threaded a length of 15 mm on each end) are mounted vertically on a horizontal circular brass plate 10, the brass rods carrying aluminium sleeves 50 to stabilize the system. The rotor 26 is installed into the lower ball bearing 9.

The rotor 26 has a section on its lower portion (Length 70 mm, diameter 60 mm) which also holds the distributor 27 and slip ring 29.

The Perspex 15 holding the carbon brushes 31,33,35,37,39,41,43,45,47 is now installed and secured by means of four copper bolts.

The circular Perspex plates 49, 51, 53, 55, is each carrying three permanent magnets as 18,19,20 mounted on each plane, as well as the electromagnets 22,32. The five stators of a plane are placed round a circular hole of diameter 480 mm cut at the centre of Perspex. The stators cover an angle of 180 degrees. This means an angle of 45 degrees between one stator and its adjacent one. The circular distance, measured along the circumference of the circle between the centre of one stator and the adjacent stator, determines the circuler length of the distance between the north and south poles of the composite polarity of the rotor. The circular Perspex plates 49,51,53,55, are now held firmly by sliding down the aluminium sleeves to tighten The aluminium vanes 76 carrying the two permanent magnets, in each plane, that form the composite poles, are now tightened into place and the top end of the rotor is slid into the upper ball bearing 11 in the copper support 28. Nuts are now tightened at the threaded ends of the brass supports 35,37 to make the system strong and rigid. A dc battery 21 is now connected to the release electromagnets via the ignition key 12, the motor 25 and the nine brushes The dc motor 25 is connected in parallel with the release electromagnets and is protected from the heavy current surge by a heavy duty resistor 23.

Section 2

The system is ready to run As the ignition key 12 is turned, current from the battery 21 turns on

the dc motor 25, which turns the rotor in a clockwise direction (which must coincide with the direction in which the second law of Emagnetodynamics says the rotor will move). The motor 25 is able to turn the rotor 26 by means of wheel and pinion arrangement (The rotor 26 carries a cogged wheel 144 mm in diameter, while the motor carries a cogged wheel, 10mm in diameter, much like a kickstarter in an internal combustion engine) The battery 21 simultaneously energises the Distributor 27, and motor 25. The distributor 27 makes electrical contact with the brushes 33, 35, 37,39,41,43,45, thereby energizing the Release electromagnets much like a distributor in a conventional internal combustion engine would fire the four PLUGS. The first release electromagnet 22 in plane 1, is timed to develop a North Pole strength which must equal, or nearly so, the pole strength of the stator permanent Magnets. This must happen at the INSTANT that the magnetic axis of the leading composite pole of the rotor has just crossd the magnetic axis of the Electromagnet 22. The rotor 26 moves on and at the point where the magnetic axis of the leading rotor composite pole is about to cross the magnetic axis of the last rotor permanent magnet 19, the distributor 27 makes contact with the second brush 35, thereby energizing the last stator electromagnet 32, and thereby freeing the trailing composite pole of the rotor, a South Pole which would have been otherwise attracted, and held back by the North pole of the last stator permanent magnet 19. This would have impaired the rotation of the rotor and stalled the machine. Being a four plane machine, torque exerted on the rotor by other stators in other planes, enables the rotor cover the idle distance and this brings it once more under the influence of the first stator electromagnet 22, whose iron core draws the leading north pole of the composite rotor pole under its influence and the process is repeated. The rotor is thus able to continue its rotation.

Notice that the four vanes all attached to the rotor but traversing different stators in different planes, are not disposed at an angle of 90 degrees each.

What we find, in fig 6B is that the first vane Vl is leading the second vane V2 by an angle of 90 degrees. V2 leads V3 by an angle of 135 degrees,while V3 leads V4 by an angle of 67.5 degrees. The simple angler disposition of rotor vanes in a four plane machine would have been to divide 360 degrees by four so each vane will lead the following vane by 90 degrees. We have not adopted this simplistic approach in the design because it would have meant the distributor will energize more than one electromagnet at the same time. Since the electromagnets draw enormous current from the feedback generator, the latter may not cope with this great drain on its scarce energy, and the system may stall. To avoid this fatal situation, the vanes are disposed as shown in fig 6. For a six plane machine the disposition of vanes will again be different and so on. The whole idea in the design is to avoid a situation where more than one release electromagnet is energized at the same instant.

Were we building a five or six or twenty plane machine, the angular disposition must be determined separately for each case just as a designer of an internal combustion engine designing a four, five or six CYLINDER engines, must for each engine decide the angular disposition of the projections on the CAM SHAFT which in turn determine the FIRING SEQUENCE OF PLUGS IN THE compression chamber.

From the foregoing, we can see that though we call this machine a magnet motor, IN REALITY, AND FROM A DESIGN STANDPOINT, IT HAS FAR MORE IN COMMON WITH THE

INTERNAL COMBUSTION ENGINE THAN IT HAS WITH A CONVENTIONAL ELECTRIC MOTOR.

Section 3

Referring to the Fig 7, for the rotor 26 to rotate, it is necessary to ensure that the circular length of the vane approximately equals the circular distance between one stator magnetic axis and the next one.
This is a critical condition for the system to work. It is equally essential that the pole strength of all stator permanent magnets are equal or else the first and second laws of Emagnetodynamics would not have been complied with and the machine will not function.

The Emagnetodynamics machine is essentially a magnet motor. It is therefore necessary to ensure that only non magnetic metals are used to build all the parts of the machine or else critical magnetic field strength required at certain points will be weakened or impaired. All bolts, nuts, etc are made of copper or brass or aluminium to avoid magnetic INTERFERENCES AND DISTORTIONS which would critically undermine the set up.

Just like the plug of an internal combustion engine must be ignited at a particular TIMING, the release electromagnets must be "ignited"/energized at the proper TIMING in order to secure releases of the rotor 26 at the backlash points and keep the motor running. To ensure this PRECISION TIMING, the positions of the carbon brushes, are made adjustable, much like the TIMING CHAIN of an internal combustion engine. The brushes are mounted on bases that themselves move on circular grooves made on the rectangular Perspex 15. When the appropriate timing position has been determined, the brush base is screwed unto the Perspex base by means of a brass bolt and brass nut.

Section 4

Refer to fig 7 of the invention,the rotor 26 is made of copper and is 870 mm high with holes made along its stem at various heights to take vane stems; these coincide with the heights of the four planes.

While the rotor 26 has big stem with a diameter of 60 mm, and length 70mm,the rest of the body has a diameter of 30mm The slip rings 90,94 (width 10 mm and thickness 0.5 mm) are made of copper,which is both a good electrical conductor and non-rusting material. These are desirable properties to ensure there is always good electrical contact between the slip ring commutators and the brushes. The BRUSH CONTACT RESISTANCE must not be more than 0.2 Ohms. Of course the slip ring commutators are effectively insulated from any electrical contact with the rotor, using paper insulation as is done for a conventional electric motor commutator.

The permanent magnet stators, being the main source of torque exerted on the rotor 26 must be very powerful or else the resulting machine will be weak. In fact,the permanent magnet stators used by the inventor to build the working model of the non-self-sustaining emagnetodynamics machine each had magnetic pole strength that gave an angler deflection of 25 degrees on a magnetometer placed one meter away. The magnets were Alcomax magnets, but of course, since

buying these magnets some twenty five years ago,more powerful magnets have been invented in the form of NEODYMIUM magnets.

An Emagnetodynamics machine having only one plane is like an internal combustion engine having only one cylinder, as against the traditional four cylinders, four stroke engine or a conventional electric motor running on only one coil. The practical Emagnetodynamics motor must have many planes, at the very least, four planes in order to produce enough torque on the rotor 26 resulting in a powerful machine. The more the number of planes, the more powerful the resulting machine and it is desirable to build machines with as many as 10 to 20 planes even though MAGNETIC SHIELDING becomes of critical importance in order to shield the magnetic fields created by one plane from influencing the fluxes in an adjacent Plane.

Reference fig. 21 of the invention. 51, 52, 53, 54 are electromagnet stators of a one plane machine. While 51, 52, 53 are all connected in parallel and energized together, 54 which is the release electromagnet is energized separately in a different circuit. It is found that for the system to rotate, some 120V must be fed to the three stators while 72V must be fed to the release stator 54. The current flowing in the first circuit as measured by ammeter Al is 45A, while A2 read 6A.

If the power developed by this machine, rotating at 300 rpm is calculated it will be as follows:

1. 240V source is the main power input to the motor

The control or auxiliary input to the motor supplies relatively negligible power when K2 is closed from the motor position at mmf axis of S2 to mmf axis of S4.

Power output of the motor is Rotor Torque times Rotor Speed in radians per second

Pout = T x [omega] = T x (300 x 2 [pi]) / 60 = 10 pi T watts.

3. Assuming lossless machine, Input Power = Output Power,

Power from S1, S2, S3 = 45 x 240W = 10800W.

Assuming that K2 is on for [theta] radians per revolution (from S2 axis to S4 axis), or 120 deg.,

power from S4 = 72 x [theta] / 2 [pi] x 6 W = 68.75[Theta] W. = 144.4W

(a) Percentage of power attributed to S1, S2 and S3 = 10800 x 100 / (10800 + 68.75 [theta]) =98.7%

(b) Percentage of control power attributed to S4 = 68.75 [Theta] x 100 / (10800 + 68.75 [theta]) = 1.3 %.

FROM THIS RESULT IT IS CLEAR THAT IF A SMALL FEEDBACK GENERATOR IS LINKED TO THE ROTOR SPINDLE, IT WILL SUPPLY THE 1.3% POWER REQUIRED TO WORK THE RELEASE ELECTROMAGNET AND IF WE REPLACE THE

ELECTROMAGNETS S1, S2, S3,WITH PERMANENT MAGNETS, WE HAVE A MACHINE WHOSE EFFICIENCY IS WELL OVER UNITY.

Section 5

A different version of the self sustaining Emagnetodynamics machine can be built by adding a current booster in the circuit of the feedback generator The output of the feedback generator is then fed into a PULSE CIRCUIT,such as shown in fig 21 A pulse circuit is simply a circuit in which electrical energy is stored in a capacitor and discharged very fast A large current flows for a very brief period Since the release of rotor required at backlash points boils down to ACTION AT A POINT, lasting only a few milliseconds, the current pulse so produced is enough to free rotor at backlash points.

DECEIT OF ENERGY

It can also be argued that the selfsustaining emagnetodynamics machine
Os exploits the principle of deceit of energy This is explained this way

In the conventional electric motor, full current must flow through the coils at any and every instant for the motor to function. This means HEAVY ENERGY must be constantly supplied to the electric motor. For the emagnetodynamics machine, it is not so. We do not need heavy energy at every instant. We need heavy energy only at the point where we need to secure the release of rotor vanes from the decelerating effects of backlash. For a machine rotating at a speed of 600 rpm or example,we need heavy current for how long ?

A machine running at 6OOrpm is doing 10 rps. The diameter of slip ring commutator is 60 mm and the width of distributor is 20 mm. So this distributor makes contact with a carbon brush for 0.01 seconds. This is one hundredth of a second, which is very short indeed. This is the PULSE DURATION. Besides or the rest of the time that one revolution lasts, the permanent magnet stators supply the torque needed for motion. The energy stored in the permanent magnets is converted to mechanical energy.

The Television also uses the concept of DECEIT OF THE EYE. Small spots from an object hitting the retina, stay on for a few seconds. If this happens fast enough, different spots appear continuous and the eye "sees" the whole picture as one.

One can say that the emagnetodynamics machine sees the pulse of energy appearing at the backlash points as one continuous chain by virtue of energy gaps covered by the permanent magnet stators

Section 6

The advantages of the sel sustaining Emagnetodynamics motor,over and above the conventional electric motor is obvious. It means this motor can replace electric motors wherever electric motors are being used presently. This includes but are not limited to electric cars, trains, trolleys, electric fans, etc. Miniaturised emagnetodynamics machines, if they can be built, will also

replace electric motors in clocks, grinding machines, toys, etc. It could also be possible to install small emagnetodynamics machines to supply current to television sets and radios, so we can have these important gadgets that do not require electricity or battery to operate. Indeed the emagnetodynamics machine possesses the capacity to radically change the way we live. The energy saving for mankind will also be enormous. In a world where energy is scarce and costs so much, apart from its capability to disturb world peace, a machine that needs no external energy input to function will be of great interest and industrial value.

The theory of Emagnetodynamics and the successful design of the Emagnetodynamics motor,which took thirty-one years to accomplish, opens a new field of learning in science and engineering. This is a field that needs to be more deeply explored by scientists and engineers around the world. The inventor has found the field very interesting and exciting indeed.

More research work in this area will include, but not limited to, finding out the detailed characteristics of the Emagnetodynamics machine and just how they compare with those of the conventional electric motor and internal combustion engine.

To build compact and sturdy Emagnetodynamics machines, new and more efficient process of magnetic screening will have to be invented, along with more powerful and sturdy permanent magnets. That does include the invention of current-rich dc generators to work the Emagnetodynamic machine.

Section 7

In broad embodiment, the invention is a motor that works on the principle of interaction of permanent magnets, or even electromagnets, utilizing the laws of Emagnetodynamics as against the force exerted on a current-carrying conductor in a magnetic field.

The theory of Emagnetodynamics is also a product of the inventor's research with magnets which lasted thirty-one years.

Another version of the machine uses no vanes. The soft iron slabs are pasted on the rotor as angular dispersions. The rotor itself is made larger in diameter to accommodate this change in design. This version also has only two split ring commutators, much like the conventional electric motor. The planes could be up to 30 or more and this leads to a more sturdy and simple powerful machine that does over 2000 rpm.

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http://www.overunityresearch.com/index.php?topic=448.0

MileHigh
Position: Hero Member
Nigerian free energy scam
« on: 2010-12-10, 14:21:48 »

Some of you might be aware of the story about the Nigerian schoolgirls that allegedly made a

free energy machine. Our comrades at EF have been following up on this and the trail has led to a person named Ezekiel Izuogu. This person has a new free energy machine that can allegedly power a house. I think that we have all heard that one before.

Somebody got a letter from him with the details:

http://www.energeticforum.com/renewable-energy/6841-lockridge-type-principal-device-tesla-self-run-motor-generator-5.html#post121134

Quote
Dear David,

Thank you for your further enquiries on the M-1000.The designs for a practical and commercial prototype which is the M-1000/450,are ready
and a working model can be produced in 2 weeks.This is because the machine has no more than 10 parts.

But the snag is that it is a patented product and if you wish to produce for commercial purposes the law demands that you sign a licensing with us.IF HOWEVER YOU WISH TO PRODUCE JUST ONE FOR YOUR OWN USE,YOU MAY NOT NEED A LICENSING AGREEMENT BUT YOU WILL HAVE TO PAY US FOR LIMITED RIGHT TO PRODUCE OUR DESIGN,WITH AN UNDERTAKING NOT TO
COMMERCIALISE.

We can give you right to produce for personal use for just $100,000.00 with signed full money back guarantee.

Machine will serve you for a minimum of 30 years with no external energy input.

With a good mechanical engineering/production workshop,machine can be produced and working in a minimum of 2 weeks and maximum of 4.

If you have any more questions,do not hesitate to get in touch.

Sincerely,

ezekiel

The above represents the lowest of the low in the free energy cottage industry. This guy Ezekiel is hoping to strike it rich by finding a wealthy and gullible person that would be stupid enough to send him a bank transfer for $100,000. Then he will simply disappear. It's noteworthy to mention again that the trail started with the two Nigerian girls. The two girls don't have a small free energy machine, the whole thing is a scam. Reporters that have no technical knowledge can easily be manipulated into publishing articles about stuff that isn't real, it happens all the time.

MileHigh

12-09-2010
Slovenia Slovenia

According to the Nigerian inventor, Ezekiel Izuogu, he has a new machine almost ready for release to everyone. It is much larger than the earlier model perpetual motion generator that had a 60mm rotor. The rotor on the new machine will be 1000mm in diameter instead of 60mm. It will power a Japanese generator with the energy guzzling parts removed. So, maybe we should wait on the details of the new machine instead of jumping on the old one. Supposedly the new machine will power a small office or regular size house. So, that's an interesting update indeed.

Originally Posted by nenergy View Post
I had talked to a few Nigerians online and they gave me some more leads to follow.

This is the same generator that was designe by Joshua Uhuotu Toluwani Ojapa, and Funmilola Olanrewaju Lawal.

YouTube - Intel ISEF 2009: The Design and Construction of a Fuelless Power Generator. This video details the operation of the generator, they also have a schematic, I am still waiting for it.

http://www.youtube.com/watch?v=ZzOV6dFAcsw

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US Patent Application 20100141073

THE IZUOGU MACHINE (THE SELF-SUSTAINING EMAGNETODYNAMIC MACHINE).
MX2009013309

LA MAQUINA IZUOGU (LA MAQUINA EMAGNETODINÁMICA AUTO-SOSTENIDA)
CR11192

The izuogu machine (the self-sustaining emagnetodynamics machine)
AU2007209814

THE IZUOGU MACHINE(THE SELF-SUSTAINING EMAGNETODYNAMIC MACHINE)
KR20100046134

Larry JAMISON Energizer

European Patent Application EP 0 067 755 -- Energy Source Employing Electrical Energizer (PDF)

***San Francisco Examiner* (Sat., January 3, 1981), p. A6**

"Inventor Juices up a 200,000-Mile Car"

Memphis, TN (UPI) --- A Mississippi mechanic claims he has invented an electric car that will run 200,000 miles without gasoline, oil, water or even recharging.

Larry Jamison calls the motor "the Jamison Energizer". The 65-year old Nettleton, Mississippi man commutes to Memphis seven days a week to labor on his invention, housed in his one-room shop.

"Two years ago I went to work on the idea full-time, and I've been working seven days and nights a week ever since", said Jamison.

He says he can wire th dozen or so cylindrical-shaped motors and energizers into virtually any truck or car --- at a cost of about $6,000.

"The difference between this motor and all the other electrical cars on the market is tha mine never needs to be recharged", he said. "It produces more electricity than it uses and stores it in batteries.

"Also, those other cars don't have any real power. I've got a motor that will outdo your Cadillacs and your Lincolns. When we get into production, I'll guarantee the motor for 200,000 miles".

Jamison Thursday displayed a 1977 Ford Courier pickup equipped with a Jamison Energizer. He admits it has a couple of "small bugs".

He said a control switch that acts as an accelerator is giving him problems and keeps him from driving the pickup himself.

Jamison's secret is a shiny metal cylinder a little mor than a foot long and about 10 inches in diameter. He won't discuss what makes it work.

"This is the only one like it in the world", he said. "I don't care what electrical engineer you bring out here, this is different. It's not in the book".

Jamison said no one will believe his idea will work.

“For two years, people have been saying, ‘You’re nuts --- it won’t run. Everybody just said I was throwing my money away --- that it won’t run a lick”, he said.

As Jamison talked, an associate drove the pickup back and forth across the shop.

“It’s working”, he told the onlookers. “You can see that for yourself”.

Jamison says he’s been contacted by major firms in Germany, France, and the US, but doesn’t plan to make a deal.

“But I ain’t going to let nobody have it”, he said. “I want to manufacture it myself”.

[Larry Jamison died in 1987. His business associates were L and J Enterprises, Inc., 1299 McLamore St, Memphis, TN; Tele. 901-942-9313; Bill Tunstill, Gen. Mgr.]

Joe BOOKER

Joe Cell

Introduction: The "Joe Cell" was discovered & developed by an otherwise anonymous Australian named "Joe". It appears to be a quasi-electrolytic cell that somehow utilizes Zero-Point Energy or Orgone to generate a gas that is not hyfuel (the water is not consumed) that can run (or supplement the running of) automobiles and other engines, besides charging water for health applications, agriculture, etc. In April 2006, American experimenter Bill Williams was death-threatened by two unidentified gonzo punk jerkoffs who knew all about him and his family, etc... This event has of course sparked a resurgence of interest in the Joe Cell. Here is virtually all of the available data on the subject. Download it while you can. Proceed at your own risk....

See also : **Moshe DANIEL : Moe-Joe Cell**

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www.joecell.com/au: 1. Cell Problems ~ 2. Starting a Cell ~ 3. Hybrid Cell ~ 4. Mark IV Joe Cell ~ 5. Negative Electricity ~ 6. Joe Cell for Beginners ~ 7. Cell Stages ~ *Update #5: The Cell & Zero Point Energy* ~ 8. Update # 6: The Joe Cell & the "Y-Factor" ~ 9. Update # 7: Stainless Steel & the Joe Cell ~ 10. Update # 8: Car Operation

Experimenter's Guide to the Joe Cell: (http://www.joecell.com.au/alexbook.html)

Pure Energy Systems (www.pesn.com):

Blueprint
Death Threat
"Modified Joe Cell Extracts Aetheric Energy to Charge Water"
"How to Run Your Car on a Joe Cell"
Video : B. Williams Ford truck running on Joe Cell (http://www.freeenergynews.com/Directory/JoeCells/replications/Bill_Williams/fordrunningonwater.avi)

Google Search Results: "Joe Cell" (First 10 pages)

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www.joecell.com/au 12-12-2001---

CELL PROBLEMS.

AIM

To again cover the issues related to getting a Joe cell to stage 3, by a ‘normal' patient individual and utilising readily available tools and materials.

Please note, most of the following material has been covered in my manual, there is very little additional data in this paper.

However, this material is presented in a different way so that some people may find it easier to comprehend.

INTRODUCTION

On looking at the Web on subjects related to the Joe cell, two things crop up over and over. Namely, the incorrect use of information as supplied in my manual and the resultant cries of ‘I cannot get stage three, help!’. The cloud screens of misinformation, wild unsubstantiated guesses and sheer pie in the sky guess work does not help the above matter.

Please let me try to tell you as to how I see the cell information problem.

For obvious reasons, the expert on the Joe cell is Joe! However, as Joe has not published any material or authorised any photographs or videos, the information from the horses mouth is zero.

So what do we do? Well, for a start, we must be very careful that we do not listen to information from the other end of the horse. With Joe we have a couple of options:

1. Visit Joe and look, learn and listen. Great! many people have done that. Some actually have stayed with Joe for periods as long as 9 months! On leaving Joe, they were not able to replicate what Joe can do.

2. Ring Joe up on the phone and have a talk. Great as well. Unfortunately people have talked to Joe for hours on end, and although they heard plenty, were still not able to replicate Joe’s work.

Okay, what gives? How come all these thousands of visitors (yes, that figure is correct as Joe keeps a visitors book), that are keen and eager cannot duplicate what Joe has shown them or told them on the phone?

Six options:

1. Joe is a fake, the cell is a dud.

2. Joe is deliberately laying down a smoke screen.

3. All the visitors are stupid and cannot follow simple instructions.

4. Joe is a very special person and no one else has his special vibes.

5. The cell will only work at Joe's place due to a ley line, a space warp or similar.

6. There is a set of special design procedures that Joe is not telling anybody about.

From the above list, and after spending 8 years full time on the subject, I can tell you that you can eliminate completely, option 1, 3 and 5.

Option 2 and 6 are a FACT! Option 4 is only partially true.

Where does the above analysis leave us?

The good news is, that if you know the special procedures required to make and start the cell and if you have the right ' polarity ' when in close proximity to the cell, there is no reason why you cannot get a cell to stage 3.

Unfortunately life is not that easy, I still believe the Y factor is a variable to consider. As I am not privy to the Joe and Dennis secrets, I will assume that the polarity of the person is important at least in the early seeding stages of the cell.

Joe has stated that the location and the polarity of the person does play a role, Dennis is saying that he has the problem licked. I am saying that I do not know, thus I am playing it safe by warning you that if all else fails check your location and your polarity. Both those topics are covered in my manual if you require further information.

Of course when and if Joe and Dennis finally take pity on us, and lay their cards on the table, the whole Y factor issue should be resolved.

I am not holding my breath however, as anal retentives have reasons to be retentive.

PIN-POINTING THE PROBLEM

As this paper is headed ' Cell Problems ', I will not cover problems in the transfer stages or the modifications required to the ' consuming ' device. I will concentrate on the cell only.

The above title is somewhat of a misnomer as I will describe how to make a stage 3 cell. If you do not follow the instructions, then you can pin point the problem to the step that you did not follow.

I am telling you what I know will work. If you decide to take short cuts with my suggestions, fine, but don't come to me when your cell doesn't work!

In the following sub-headings I have covered the locations where the problem may reside and I have suggested various options.

Location --- Strictly not cell related, so see my manual.

The individual --- As above.

Cylinders and case material --- As we are employing electrolysis, it would be logical to employ a material that is largely immune to the actions of the electrolysis process. After many tests, and including Joe's recommendations, stainless steel is the logical choice. All other material like copper, brass and aluminium are interactive.

Joe has suggested food grade non-magnetic steel as the ' right ' one. This advice is a little nebulous, but it points us to the 300 series of stainless steels and logically the choice is out of 304, 316 and 316L.

The dairy industry in Australia (this is where Joe obtained his steel) uses 304. Lately Joe has suggested 316 non-magnetic, food grade.

I personally have found very good results with 316L.

I would suggest to you that 304 or 316 are both fine, the points that are important is the non-magnetic aspects of the material and the neutrality to electrolysis.

The next stage is to find the stainless and make sure that we buy the correct type.

Where I am, I can simply go for a 20 mile drive and this will allow me to have a scrounge at several scrap metal dealers. Of course you may not be so lucky, you may have to buy it new, ouch.

A couple of years ago, I was involved in the testing of all possible stainless steels for a potential mass producer of the cell for the world market. Now this was a chance of a life time for me as I did not have to pay the many thousands of dollars that were required to purchase a length of each type (including 316S designed for the nuclear industry, very beautiful material indeed).

After 7 months of testing, I made some very valuable conclusions that I want to share with you.

* Most stainless has a seam along the entire length that is either a straight or spiral weld. The quality of this weld varies greatly as well as the uniformity of the thickness of the tube on the weld.

* It is very hard to find seamless stainless. This converts to very expensive, and you really do not need it.

* If the stainless is wrapped in a plastic sleeve or if it has the type number stamped on it at regular intervals, you will find that this type has a better seam weld.

* If you can see a darker weld colour along the seam, I would suggest that you test it thoroughly before you pay for it.

* If you can feel that the thickness of the tube is greater on the weld compared to the rest of the tube, again be very wary.

* If as you rotate the tube in your hand, you can feel that it is not truly circular, again be wary. You could use a pair of callipers or similar if you do not trust your feel. The tube should be circular to very close limits.

* I was unable to find a good tube in all the cheaper Asian imported material even though they had a mirror finish. You have been warned!

To put the above together, I would suggest that you only buy top grade stainless AFTER you have tested it with your magnet.

What magnet you say?

All Joe cell experimenters have a rare earth magnet on a piece of string or Nylon, sheesh.

The first thing that you learn about this magnet is that it loves to erase credit cards, so do the obvious, keep it well away from your wallet and similar.

I have made a keeper for mine, that joins the North and South poles together and this reduces the stray fields considerably whilst I carry it.

If you dangle the magnet on about a foot of line, you will notice that it will be gently attracted to some areas of the tube, but rather more to the seam. If it sticks to the seam and stays there supporting its own weight, that tube is NOT suitable! I don't care if you are going to heat treat it or even if you get the Pope to bless it, give it a miss.

Mild attraction, is okay as long as there is no areas that have patches of strong attraction. Remember, I am talking about checking the whole damn length and not just doing a ten second swing to impress the guy in the shop. Yes, it is a pain in the butt and may take you at least half an hour (for a whole cell set) and by this time any staff member would have long left, leaving you with a questioning look. <g>

So to conclude this section, get the good grade and test it to make sure it is the good grade.

Making the Cell ---

This involves cutting, polishing and joining operations. Any of these steps may cause irreversible damage to your investment, so think about it.

Cutting can be performed with a bi-metal blade in a hacksaw, with an angle grinder and a metal cutting wheel or with a lathe. The secret is to keep the heat way, way down. If the cutting process

will generate heat (as with the angle grinder), leave a ¼ inch spare in length and trim to size on a lathe.

Nice and slow with a bi-metal blade in a hack saw will do the job.

I would suggest that in all cases, the cylinders are finished to size on a lathe as this is the only easy method of assuring that all the cylinders will have two parallel and flat faces, and all tubes will be the same length.

The overall match in length is not that critical, a few thou here to there does not matter! On assembly you simply make sure that the tops are all level and the bottom length difference is not that critical.

The next step is the polishing. Before moving to that step again check your tubes for any extra magnetism, ALL OVER! It this has not changed, move on to the polishing.

The rules of polishing are simple, the smoother the better, the less heat the better.

The less the polish on the surface the less the efficiency of the cell, but it will still work.

A mirror finish inside and out is great, but I for one have better things to do in life, however if you have the tools and the inclination and the time go for it.

I spin my cylinders in a lathe and use a 360 grit emery cloth until all major scratch marks are removed and if you held a screw driver (or similar) right next to it you can see the reflection. At no stage are my tubes that smooth that I can use them as a mirror for shaving. Don't laugh, I have seen tubes like that from others. Beautiful, but they did not work!

Make sure that you polish in a circular sweep (around the tube) and not up and down the length.

You do not want any criss-cross marks at all.

When you are happy with these two operations, move on. If you have used any high speed polishing method that generated heat then, yep, check them all over for a change in their magnetic effects.

The joints on the outer casings are super important and the source of MOST failures of the cell to go to stage three. As you can surmise, the cylinder to cone and the cone to outlet adaptor are the two joints that will stop the cell dead.

A weld at either of these spots will create a lovely ring of heavily magnetised metal and stop the cell dead from being able to transfer the ' force ' to where you want it.

Have a real serious think here before you hit these areas with your arc welder designed for welding battle ships.

Unfortunately I cannot enclose pictures with this paper, but my manual has a few of the related photos but not enough to do justice to the subject.

I will have to work out some way of getting about 6o M/bytes of photos onto a suitable site. Anyway back to the subject at hand.

Joe and I recommend no welding at these critical areas. This makes it makes it much harder as far as construction is concerned, but it is the only 100% guaranteed method of not introducing a magnetic change at these critical areas.

The bottom joint to the flat base or cone or sphere is nowhere near as sensitive.

I have made over 30 cells and all are different. I have featured a cell in the manual, (Old Trusty) that breaks most of the above rules, there are always exceptions to rules as after all rules are made to be broken, WHEN you know what you are doing that is.

There are many ways of holding two pieces of metal at a butt joint without welding or brazing or even soldering.

What you want is a seamless transition of tube inner diameter to cone and then to your outlet. Many ways of doing this, and we have the great advantage that the joint is not under any great pressure and thus welding is not mandatory.

I will again stress that the less heat used on the joint, the greater is your guarantee of success.

In descending order of preference of a joining method,(the lower the better);

oxy. acetylene welding, oxy acetylene brazing, arc welding, Mig welding, soldering, cold welding (chemical two packs), Tig welding, threaded joint, press fit joint, butt joint with outer support sleeve, butt joint and Sikaflex, one piece cell casing.

From the above as you can see, the top joint is permanent and access should be provided via the bottom joint for maintenance operations.

The central bolt fixture:

The bolt, washers and nut must also be compatible material and also must not exhibit magnetic anomalies.

Whatever method you decide on to join the bolt to the inside of the one inch tube, please observe the following;

* The bottom of the bolt head must be at least 1/8 of an inch inside the tube.

* Do not weld the bolt to the tube, a press fit is the way to go.

* Make sure that there are gaps for water circulation in and out the bottom of the tube.

* Design your bolt fixture so that the neutrals are at least ½ inch off the bottom of the cell (that is if you are using a flat bottom plate)

* Insulate the bolt body from under the bolt head to your inner exit washer. Nylon or similar type tubing is fine.

The insulators:

Many insulators have been tried, many insulators have failed!

If the insulator leaves a pitted or burned mark where it is wedged against the cylinders, it is shorting out, It is no good, throw it out! I am not talking about shorting out as in Ohms law and low resistance. I am talking about a shunt to a very high frequency field!

PLEASE READ CAREFULLY:

One of the greatest causes of cell failures is the insulators. The insulators have to be compatible with your cell design, the water and the chemicals that are in the water. I do not mean deliberate chemicals that you put in. I mean the chemicals that are already in there.

For example, the cell does generate ozone. Ozone mixed with air will make nitric acid (reaction with the nitrogen). Nitric acid is very chewy stuff.

I am sick to death of people saying that Joe does not use electrolyte. Yes, that is true, I also do not use electrolyte in some of my cells. However, Joe's stream water is full of fertiliser from the adjacent farming and so his water does have electrolyser in it even though he does not add it himself.

Just think about it please, Joe can pass 25 amps at 12 volts through his cell! No electrolyser? Yeah right!

All natural water has chemicals in it, and this chemistry will reduce the resistance (conductance) of the water and thus increase the current flow.

Water that does not have electrolyte in it (artificially made water), has such a high resistance ,that at 12 volts, you would get hardly any current flow, very low electrolysis and thus no bubbles.

Bubbles mean (in this instance) electrolysis and electrolysis means current flow and current flow means chemicals!

Back to the insulators. <g> If the metal shows sign of corrosion at the insulator location, you are using the wrong insulators. Throw them away.

If the insulators have gone all slimy and or mushie, you are using the wrong insulators. Throw them away.

Some insulators that have ‘ worked ’ for me and others are;

* Red chemical rubber bottle stoppers. can make the water go red, I don’t like them.

* The early version of traffic counting air hose, the present one is useless.

* The black hose used for oxygen for welding. Must be the old type without the ribbing!

* Various type of glue sticks. Tend to be too soft.

* Various types of rubber lines as used in cars. beware, some are no good. Not worth the bother.

* The use of little mica washers on each side of the insulating rubbers. These are normally used as insulators for transistors when the are mounted on a heat sink. Far better to use the right insulators and thus not have to fiddle around with mica as well.

* Ebonite rod shaped to size. My preference.

* Glass marbles. Very hard to put in, but when in, they do a fair job.

* Silicone hose as used in hospitals and laboratories (the clear stuff). Works well although a little too soft.

* Sikaflex. Home made and Joe’s preference. Works as well but no better to ebonite in my cells.

If you get a cartridge of Sikaflex (marine grade, white) and allow the Sikaflex to cure in the nozzle, you can remove this plug and cut it up for a couple of insulators. I am sure that with a bit of imagination you can work out a better way of making a whole stick at a time.

When inserting the insulators, place them in three radial rows about 120 degrees apart and about a ¼ inch down from the top and bottom ends of the cylinders.

The Water:

The subject is covered in depth in my manual, so what more can I say that may help?

I must repeat, do not use tap water or any water that has chlorine, fluoride, alum, lime or similar additives in it. It will not work and will also cover your cylinders with oxides and thus stop the cell from ever going stage 3, guaranteed

I only use spring or rain water, or in desperation a water called Noble water and sold in supermarkets in Australia. The Noble water is guaranteed chemical free and it works to a degree but is a very slow starter and seems to die or as Joe say’s ‘ go off ’ quite easily.

I have no problems in getting a cell to stage three with rain or spring water.

My problems is keeping it at that stage.

Try an use fresh water and do not store it in the sun or in plastic containers. Imagine that you are going to drink it and treat it in that fashion. If you would not drink it yourself, why do you except the cell to like it?

Power Application:

The rules are simple, do not cook the cell, do not overcharge, do not use to much current.

When I wrote my manual, I tried to set some sort of standard that all cell experimenters could follow and thus we could all compare notes.

Hah, now that was wishful thinking!

The standard came from tests by Joe. For example, when he ran his cell on his son's Escort, he had an ammeter in series with the cell and it was indicating 1.26 amps.

So, 12 volts and 1 amp seemed like a nice all round figure to use as a standard. However, as I soon found out, this information was translated in so many different rules and methodologies by all and sundry, that any attempt to maintain some sort of uniformity was a waste of time.

This must reflect normal human nature as we can see by simply looking at all the different standards in the audio and video fields to name a couple.

Since those days I have changed my recommendations to allow all people to do their own thing.

Simply stated, you should pass about a ¼ to q ½ of an amp through your cell with NO electrolyte. If you do not see some action with 2 minutes, turn if off and look for a problem.

I repeat, there is no point in going on, if it has not shown signs of action in 2 minutes, it never will.

HOWEVER --- and this is a very important fact --- The cell may behave differently every time you reapply the power. Only a stable cell (fairly rare creature) will behave the same way on each power reapplication.

To repeat the above, an unstable cell may produce different behaviours each time you reapply the power. A stable cell will start in the same mode each time.

Depending on the conductivity of the water, you may find that you will need up to 250 volts to get this ¼ to ½ amp current flow. I have found that generally 75 volts is a good ball park figure with my types of water.

Obviously if you want to use the cell in a car, you will have to play with the electrolyte as mentioned in my manual, as you have no control on the voltage (about 14.9 volts is as high as you will get).

On the power supply topic, please read my paper on negative electricity, as this is the requirement for the stage 4 cell. At this time , I have been unable to make one, and as Joe is not telling, it may take me a bit longer to come up with the design.

At the moment I am working on a Tesla switch (Bedini two capacitor concept) as a power supply for the cell. I will let you all know if I come up with something.

Cell Observation:

Some things to look for in a stage 3 cell:

* All cylinders should stay clean, on BOTH sides.

* The cell will ‘ remove ’ out of the water what it does not want . This ‘ scum ’ should be either at the top or bottom of the cell and not on the cylinders.

* You should filter this ‘ scum ’ out of the water and keep reusing the water that the cell is converting. Only top it up, do not replace it unless you are not getting anywhere with the cell.

* You should see very small bubbles rising from both side of the cylinders.

* The top surface of the water should develop an oily type film (surface tension). This will only occur if you keep the water at the right level.

The right level is meniscus height or just high enough water for the bubbles to freely flow on the total surface of the water. Obviously you should keep the cell level to achieve this.

* The cell should never get hot or even warm.

* On turning the power off, the tiny bubbles should form little islands that may be turning in a clockwise or anticlockwise direction or some one way and others the opposite way.

* The bubbles should not simply rise to the surface. You should see the tiny bubbles following eddies and meandering all over the place. For example they may be travelling in one direction between one set of neutrals and travelling the opposite direction in the next gap.

* When the cell is charged you will notice a North/South magnetisation in the vertical plane. This is normal and a good sign. On removal of the water this field should disappear.

The above is what I do and what I have observed with my stage 3 cells. You should do and see very similar results. If not, go through my points and see where the discrepancy is. That may be your problem.

Good luck and don't give up, if I can do it so can you, my only trick is persistence. Stick with one cell until you are sure that it is faulty, there is no point in changing things just for the sake of changes.

The above cell does work and has worked for many. After you are familiar with the above basic cell, then and only then move into the construction of the specialised versions.

Learn to walk before you attempt to run, saves you from falling flat on your face.

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STARTING A CELL

AIM

To get the plates in ' equilibrium ' (as Joe calls it).

THEORY

According to Joe, both sides of the neutrals have to be in equilibrium. To achieve this, he drives the negative to the positive and the positive to the negative.

In the above, Joe's use of the word drive indicates his observation of the bubbles and water formation as he manipulates the applied potential's on the various cylinders, thus he is ' driving ' them.

Comment:

A longer term means of observing these ' potential's ' on the plates is observing the build up (or lack thereof) of an oxide or ' colour ' on the surface of the plates.

As mentioned in my manual, the cylinders should stay clean on a working cell. The danger of this statement is, that a shorted or incorrectly functioning cylinder will also display this characteristic.

However, by the observation of the resultant bubbles, water forms and of course the cell function, you will easily distinguish between good and bad cylinders.

METHOD

1. Connect your negative to the inner, central tube.

2. Connect your positive to the first neutral (next tube).

3. Shift the positive from the first neutral to the second neutral.

4. Continue this process until your positive is now on the outer tube (or container of the cell)

Notes:

A. --- Leave the potential on the tubes until you obtain the ‘ right ’ bubble production but no longer than 1 minute no matter what the outcome. If it does not ‘ work ’, look for problems elsewhere.

B. --- Clip your leads so that the negative connection is always in line , but as far apart as possible from the positive connection. For example, clip the negative to one end of the one inch tube and the positive to the diametrically opposite end of the two inch (next) tube.

C. --- You can swap and change the above sequence and polarities until you achieve the desired effect, BUT always end up with the negative to the central tube and positive to the outer.

D. --- The ‘ right ’ bubble formation is unfortunately an observational skill that comes with a lot of practice, and would be next to impossible to write in words.

For beginners, you will have to use the very crude method of igniting the bubbles to differentiate amongst the various gas types until you get the ‘ eye ’ to see.

REMARKS

This note is required at this time, as there seems to be quite a fair bit of disinformation (deliberate or otherwise) circulation on the Web.

Please read my lips, hear and listen, no matter if you live on the North pole, South pole or anywhere in between, on completion of start up, you must leave the negative connection to the middle of the cell, (the most inner tube).

Now there seems to be many ‘ advisers ’ recommending negative to the outer tube (case), as they get pretty bubbles, vortex actions and similar. That is all great, BUT do they have a working cell?

No, they do not, I can guarantee it, as you must have the negative to the central tube to do so.

I will give you a very short reason, so at least you will tend to believe me, but in reality you have free will and you can do what you like. I am merely an advisory sign, to be used as you see fit.

Electricity is always trying to destroy it’s dipole, it is constantly trying to eliminate the positive and negative potential differential. Magnetism on the contrary is forever trying to establish a North and South magnetic pole differential (as far apart as possible). This is an endless and balanced battle between electricity and magnetism that has been going on since the start of creation.

As a result of this ‘ battle ’, negative is a contractive energy and positive is an expanding energy. As we are trying to accumulate a force and thus create a ‘ frequency ’ with our cells, it is obvious (to me at least) that the contracting force should be inside and the expanding force on the outside. How else can you possibly draw anything in?

Reverse the potential’s and positive (the expanding force) in trapped in the middle of the cell by the contracting negative force. Not the way to go! No wonder that you have pretty signs of this battle. Similar to the sign (smell) that you get when you drive your car with your handbrake on.

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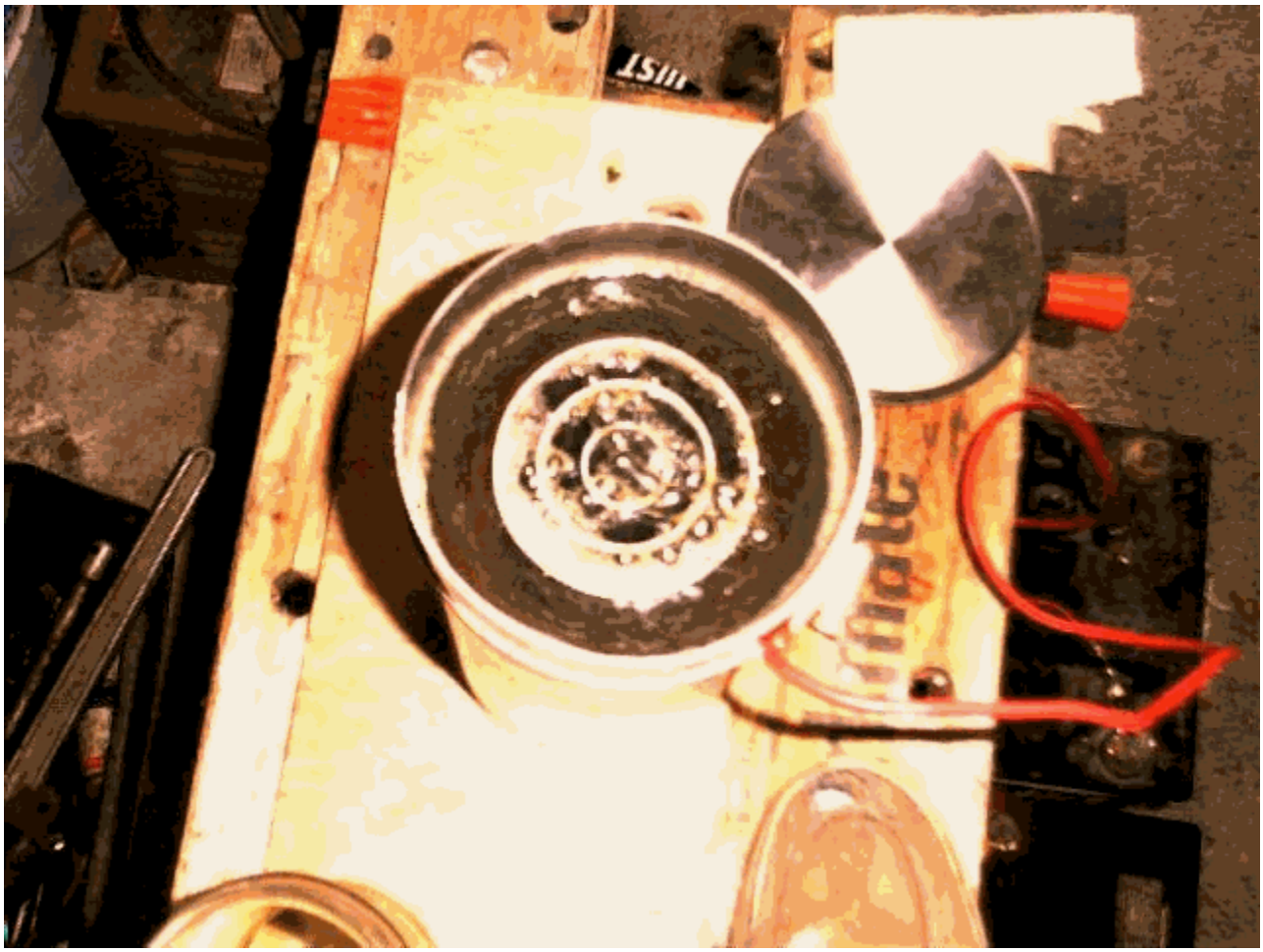
Hybrid Cell

It has a 5" outer case but only 2" and 3" neutrals, and the negative cylinder in the centre of course.

The bubbles are good Stage 2 bubbles. This shot is taken 10 minutes after I took the power off. The cell had had one application of power (24 volts at .4 amp) for 90 seconds. That is right. One 90 second charge to get to stage2. Everyone can do this if the cell is built properly. The cell now only gets 12 volts for 3 minutes twice a day, and the water is filtered daily.

Hybrid? Mark 3 case, Mark 4 internals. 24 volts and no vinegar because my juvenile living water is just slightly alkaline.



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Mark 4 Cell

These are the components of a typical Mark 4 orgone accumulating cell. Note the rubber insulator/spacers beside top dome with outlet

Please note the 1" cathode cylinder with ss threaded rod terminal/mounting bolt insulated in situ in bottom dome. As the top and bottom domes are 2" deep, the length of outer case (positive) is shortened to 8". The bottom level of the nest of negative and neutral cylinders will be 1/2" lower than the level of the 4" outer case when it is press fitted to the bottom dome.

All cylinders are seamless (no welds) and the domes have been machined for a very tight press fit onto 4" outer case. The top dome has also been machined for a tight press fit of the 90 degree 1" ss bend. The aim has been to build a cell without welds.

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NEGATIVE ELECTRICITY

INTRODUCTION

Before I wade into the subject proper, let me remind you that maybe your concept of electricity as taught in school may be a little suspect. For example, we talk of electric generators. This conjures the image of electricity being made. So if you imagine the normal scenario of a city using a remotely located power ‘ generator’, located at some distance from the city (this may be many miles away), it implies that the ‘ generated ’electron has to travel to the city to be utilised.

Further, as most power generators now utilise alternating current (AC), that means that the polarity is positive for one ½ cycle and negative for the other ½ cycle. We now have a problem.

We have the ludicrous situation where our poor electron (after being generated), leaves the country and starts it’s trip toward the big smoke. But due to distance, it does not get there as the voltage has been reversed (for the other half cycle) and our poor little traveller has to return to

the power station! Thus no power gets to the city if the ‘ generator ’ is of a sufficient distance from the load (or consuming device).

Obviously something wrong with the generator theory somewhere.

Let me say from the outset, that electricity cannot be made or used up by man. Electricity is not a substance as such, and you may have to rethink some of the accepted views.

There is a ‘ magic ’ triangle that is made up of electricity, magnetism and gravity.

The Joe cell can tap into this triangle (imagine the cell energy as being in the middle of the triangle) and changing the balance of the ‘ sides ’ can thus have full control of transmutation, gravity and many other effects.

If you imagine the cell ‘ force ’ as a very high frequency AC voltage, (NOT A GAS!) you may realise that a power supply designed to ‘ fill ’ the cell with this type of energy would be a far superior way to go as compared to a conventional power supply or a standard car battery that has a far more meagre contribution of this type of ‘ electricity’.

Never-the-less, you can make a very good cell indeed without resorting to a special power supply.

Before I forget, let me again remind you that when Joe is talking about a negative field around the outside of the cell, he is not talking about placing your negative lead to the outer container. He is referring to ‘ true negative ’ or negative electricity, NOT to be confused with standard electrical potential’s of positive and negative.

Thus after finishing with your start up procedures on the cell (see related paper), ALWAYS finish with the negative lead connected to the central (inner) cylinder.

As said many times, there are no exception to this rule, on this planet at least. <g>

SOME SCIENCE

Nuclei with a positive charge and electrons with a negative charge has long been regarded as the

‘ norm ’ and is how present science see the world and the matter that it is composed of.

However, as we live in an illusionary world , reality is sometimes the direct opposite of what our far from perfect senses relay to us as concrete facts.

For example, we all ‘ know ’ that the railway lines do not really meet at the distant horizon, and we also ‘ know ’ that a city floating in the air is merely a mirage.

Thus we also ‘ know ’ that there is only one type of electricity, the normal one that we all use and have measured with test equipment ad nauseam.

But what if there are in actuality negative nuclei and positive electrons (positrons)? Another parallel so called world, a mirror of all that we see as normal and thus ‘ fact ’. Yes, we would have atoms and the mirror anti-atoms, and these would form anti-molecules and finally anti-life. Exactly the same as we see normality. but simply a mirror image.

Of course this would also apply to electrical charge, magnetism, etc.

Before you say that all this is old news and that I should come up to speed, let me say that I am aware of the particles made by particle accelerators such as at CERN in Geneva, and yes, I am also aware of the use of positrons as in the technique called PET (positron emission tomography). And I have read the works of P. A. M. Dirac and his famous quantum theory calculations in 1929.

Yes, it was Dirac who postulated that particles and antiparticles have identical masses but opposite charges.

When these little fellows get to meet, they annihilate each other and as a result charges are neutralised and the masses are converted to energy.

Please remember this fact for my theory section at the end of this paper.

This energy can be X-ray photons, gamma rays or mesons.

Whilst on the subject and to put some perspective to the energies involved, let me quote you an example. The rate at which solar energy (solar radiant power or luminosity) reaches the Earth is about one kilowatt on each square meter. This is very useful and useable power indeed, and also goes to show the very poor efficiency of present day solar panels.

Back to the subject. What has all this to do with the cell and who really cares?

Please be patient, a brick wall is erected a brick at a time. <g>

PROOF?

So, what do we know about negative electricity in relation to the Joe cell?

Of course we have Joe’s words on the topic as relayed to us by his many visitors, but as this is the talk of the ‘ inventor ’, we really require some other ‘ proof ’ that is independent of possible bias or deliberate inaccuracy.

At this point, let me remind the reader that Joe has not put one word on paper (over a 10 year period), or allowed one photograph to be taken (not from lack of asking by myself and others), that may be used to help resolve the dilemma.

On the contrary, Joe has gone to great lengths to hide his ‘ secret ’, by evading the topic or by giving nonsensical answers to questions and sometimes even laying down deliberate smoke

screens to further confuse the issue. He obviously has his reasons and I respect his right not to share his discoveries with us. God bless you Joe.

In passing, the videos that are in circulation are poor quality videos made by amateurs for friends, and that have been circulated without Joe's consent.

As such it has been left to a few to try to convert the crumbs that fall from Joe's table into a loaf of bread that can feed the rest of the world.

As mentioned at the start, positrons are a fact of life in the scientific community, but of course the scientific community will not recognise the Joe cell. In fact talk about the cell in scientific circles will guarantee a belly laugh, scorn or simply result in you being ostracised and treated similar to a person who is reporting on a UFO sighting.

On the other hand, things are very different amongst the clandestine research scientists, but then of course these dudes are not going to come out in public, put their arm around you and declare on national TV that you are on the right track. Sorry, life was not meant to be easy.

Unfortunately I have to resort to various ' proofs ' that result from many experiments performed by ' pseudo scientist '. This is meant to be a derogatory term as used by the ' certified experts ' as a description of thousands of honest and dedicated self taught individuals that devote their whole lives to a radical project, (usually with no help or money) but usually with very noble aims.

My favourite and a very enlightened individual whose work (like Tesla) has not received the accolades that it deserves is:

WALTER RUSSELL

Born in Boston in May 19, 1871. He started experiencing annual periods of illumination. During a 39 day period of illumination in 1921, he believed he received the secrets of the universe from God, which he was asked to share with the world. In 1948 he married Lao Russell, and together they founded the University of Science and Philosophy for the purpose of spreading these teachings throughout the world.

Russell passed away in 1963 and Lao in 1988.

As we know (if you believe in the subject that is), there has been many avatars walking this earth and spruiking all forms of truths and otherwise. However, there is a great scarcity of individuals that have been told the scientific facts by ' God ' and as such we should pay very careful attention to what they have to say.

That is of course after first proving to the best of our abilities that the individuals are not deluded and merely not taking their medication.

From what Russell has demonstrated by deed and word, I for one am a very serious listener to his scientific views. Russell has written many books on the topic and as far as the cell research is concerned, negative electricity has a very good (and very difficult to comprehend) write up in his book " The Universal One ".

Some of his thoughts on the different types of electricity.

* Positive electricity is the generative electricity.

Positive electricity is that state of motion in which electricity dominates magnetism.

Positive electricity is that state of motion in which centripetal force dominates centrifugal force.

* Negative electricity is the radiative energy.

Negative electricity is that state of motion in which magnetism dominates electricity.

Negative electricity is that state of motion in which centrifugal force dominates centripetal force.

* Electricity and magnetism exist as separate appearances only when opposed. In non-opposition they disappear, they become one.

* Electricity and magnetism are not two separate forces, nor are they two separate substances. They are merely two different dimensions of motion. They belong solely to motion and not to substance.

* Neither are positive and negative electricity two kinds of electricity. Positive and negative electricity are but two differing potential's of the same force which must move in opposite directions.

As I said, Russell has written many books and it would take a life time of very serious reading to fully comprehend what he is trying to pass to us. I am only relaying on to you sufficient to formulate a theory that I hold.

RELATED DEVICES

If you have been in the ' alternative energy ' scene for a while, you will no doubt be aware of many, many experimenters working on many devices.

I will not bore you with a long list of experimenter's and their related research.

You can very easily look up your favourite experimenter by simply using the Web and a suitable search engine. Please realise that all you read is not fact and that there are a lot of grey areas, including in what you are reading now. Sorry, I am doing my best, but I am fallible. <g>

You can use Nikola Tesla, John Bedini, John Searl, Floyd Sweet, Robert Adams and Edwin Gray as representative examples of the inventors that I am talking about.

However, you will notice that some peculiarities as displayed by the cell are common to many of these devices. To name a few, the device goes cold when operating, the device shows magnetic anomalies in the near vicinity of the experiment, the device may be surrounded with a blue or pink glow, the device will build up a very strong ‘ electric ’ charge and the device may display some form of gravity anomalies.

Different cells made by many different experimenter’s, and located in various parts of the world, have displayed some or all of the above anomalies.

For the purpose of this short paper, I will stick to the electrical portion of the cell anomalous behaviour.

THEORY

I will place here some points that you may want to consider. As usual it is early days in this research and as usual I will have the people in the know (like Joe) laughing their heads off at my puny attempts, but at least it is an attempt and it may seed a far better idea that you may have.

Please share it, do not sit on it like Joe and many other selfish individuals.

* A high frequency cell generated or accumulated force will create a magnetic field. This is easily proven with a compass or a magnet on a piece of string. The cell’s stainless steel tubes that you did such a good job of testing for magnetism, will now have a very strong North South field in the vertical axis. And this field is not in the steel, for when you pour out the water the cell will go back to ‘ normal ’.

From the above, I assume that the resonant field (and thus this magnetism) is a function of the resonant cavity of which the water forms an integral part, ie. no water, no magnetism.

In simple terms we have what is commonly called a ‘ tank circuit’ and this tank circuit is generating a unique magnetic field that is DIFFERENT from a magnetic field created by a steady DC (direct current) as may be created by a normal car battery.

Tesla referred to it as a ‘ hysterical ’ magnetic field. As referred to hysteresis and not to somebody that has lost the plot. <g>

* The magnitude of the above hysterical field is the unbalancing of the three force triangle towards the gravitational effects and explains the Joe cell gravitational anomalies (to me at least).

To rephrase the above, if the balance of the two forces (electricity and magnetism) is upset or if you could nearly remove one of them, gravity as we call it would be negated.

Walter Russel stated that the electro-magnetic process of mass formation (centripetal) is balanced by the attractive power of electricity and the dissipating (centrifugal) repelling power of magnetism.

* Please remember that our teacher is Nature. Nature does her tricks with simple elegance and thus is using the proper energy efficient tools. As you can see by the above example we only have to upset the electro-magnetic balance and enormous power is at our disposal.

The Joe cell can do this and you have to respect the logic of some of the individuals who are hell bent on keeping the methods secret from the rest of us.

ENGINE EXAMPLE

As most people are interested in running an engine on the cell, let me show you the balance of the two forces, again with thanks to Walter Russell.

Intake stroke. Compression stroke

Negative, expanding. Positive, contracting

Negative, cooling system Positive, heating system

Negative, increasing volume Positive, lessening volume

Negative, discharging Positive, charging

Negative, opening spirals Positive, closing spirals

Negative, lowering potential's Positive, increasing potential

Negative, radiating Positive, generating

What am I on about? Let me tell you.

When a piston is at the top of the compression stroke, the compressed air molecules are ' charging ' and require an ' increase in potential ' or in other words, they need additional electrical charge or as Joe like to say, more electrons.

These are supplied to a large degree from the cylinder walls. But, let us assume that the Joe cell has somehow removed all ' spare ' electrons from the engine block. What now? Where do you get them from, as surely you must?

Would it be possible for the compressed air to behave differently and maybe contribute some negative (mirror) electricity (as in the science section above)? We know as a scientific fact that the annihilation of the two different particle masses (the normal and the mirror) contribute energy.

This resultant energy may cause an expansion of the captured air charge and thus result in the ‘ push ’ that pushes the piston down. Why not?

On this line, Russell stated that a sudden lowering of potential would cause an explosion, a flame or a luminous streak. Good enough for me, you of course can make you own assumptions.

Again on the same subject, please remember that Joe stated that a spark plug ignition was not required, only the electro-magnetic pulse at the right time from the car coil (a crude form of a Tesla coil).

Remember my theory (like hundreds of others) is an unproven fact, and you are more than welcome to modify and improve on my humble contribution. That is called science.

CONCLUSION

This article is here to make you think, comprehend and maybe lead you to some answers.

I feel very comfortable with the notion that the Joe cell (and similar devices) utilises a form of energy that is the same (in many ways) as a mysterious energy that has appeared for many other experimenters and equally baffled them.

In all cases, the energy ‘ appeared ’ due to a manipulation of electricity and magnetism.

I also believe that the source of this energy is present everywhere in abundance, and is the only energy that we should be using, and is our only hope in saving mankind and Mother Earth.

I also think that the Joe cell is the simplest and most elegant way of accumulating and utilising this great gift from our Creator. I have dedicated my life to this quest, and I feel very humble in the Lord allowing me to be a very small player in the experimenting with, and the resultant sharing of my research with my fellow brothers.

My last word on the subject is that unless we all share the work and thus become a force to be reckoned with, the few but extremely powerful moguls will always keep us in bondage and ignorance.

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www.joecell.com/au

JOE CELLS for BEGINNERS

or

"It Works for Me"

by

Ren

Introduction

Being a completely non-scientific type, and having spent many, many enjoyable and sometimes confusing hours watching Joe's video and reading the books by Barry and Alex, I thought it just might be helpful to new builders to document my experiences.

My advice to you is to watch that video, and read both those books, and of course, read what I have to say. It may not be of any use to you at all, but it might.

This is an account of what works for me.

I particularly wish to thank Alex and Barry for their work, and Joe for his and for passing on the wonderful information. And there is one other person I wish to thank. Guess who?

Corpus Magnus

Before we get into the real guts stuff, some of you may get a wee bit confused. If so email me. Please keep it short and precise. I would like an intro as to who and where you are. I think that is fair, don't you? **rencells@yahoo.com.au**

This is it. This is for me and for you. This is for all the people who just want to get on with doing it. Doing what? Building those funny little things that people call Joe Cells.

Now let's get it right, right from the start. What you are going to build is not a Joe cell. It is an orgone, or Life-force, accumulator that uses water as a medium. Joe's cells are Joe cells, mine are Ren cells, and you will have your own. Mary cells, Dave cells, whatever.

I need to point out now, that as you proceed with this little adventure of yours, you are going to discover some rather amazing things. Amazing things about water and weather and orgone and aether, and stainless steel and rubber and magnets and electricity. But most of all, you are going to discover stuff about you. You will also win new friends and sometimes you will wish you hadn't. You may have unexpected guests on your computer or in the sky close by, who are unwelcome. You should hope for a visit from someone you do not want to see. You are embarking, my friend, on the voyage of a lifetime.

Come on, let's get to work. I am going to show you how I do it. I build cells as close to the way Joe does as I know how. I build the Mark 3 (5 inch) cell and the Mark 4 (4 inch) cell.

Cones and Kegs:

I read Barry's book first and decided that I needed a beer keg and those big 10 inch stainless steel cones that are used in milk factories. Well I got the keg but never did get the cones. I did end up with the smaller cones (5.5 inch) from dairy farm milk/cream separators. So being one

who is full on most of the time I set up my gear. The beer keg was too big so I scored an old stainless steel hot water urn, the type they had in the smoko room at work before those horrible coffee machines became popular. Anyway, a few modifications, like ripping the guts out of it and plugging up the holes. Filled it full of water and it leaked. Not to be foiled, I found a 20 litre plastic bucket and put the whole shebang in. It had taken a lot of fiddling to get the cones spaced just right around a piece of PVC pipe. Joe uses agricultural pipe, the drainage stuff. For the life of me I could not find any small enough to go inside the smaller cones. But where there is a will there is a way.

There is a drawing of the cone/keg set-up in Barry's book, and because I have trouble drawing on these computer machines, I will not attempt to replicate it. My cone set-up is modified to suit readily available hardware. I have been able to do away with the 3 rubber spacers between each pair of cones and this new method makes the rig much quicker to dismantle, clean and reassemble.

As you can expect I could hardly wait to hook it on to a car battery. So I didn't. Wait, that is. Yep, hooked it up and watched and waited and watched and waited. I did this for a long time. The books and the videos don't say anything much about waiting. I will tell you. Impatient blokes like me actually can learn to wait, and it hurts when you first start.

I remember watching the video and there is Joe in the shed with the beer keg full of big cones and water, a flick of the switch on his electro rectifier something or other machine and then he chucks a match in and jumps as some gas explodes. Well I always did like matches. My dear old Dad used to reckon there was pyromania in the family, I reckon there was some arson about. Well I waited some more and watched some more and finally I saw tiny little bubbles and a smoky sort of cloud in the water.

After a while there was some brown flaky stuff starting to float around and drift to the top. I let it stay there. Hours later it was thicker and there were bubbles trapped in it. That was when I got match happy. Just could not resist it. Well I blew up some bubbles that I thought would be loud but weren't. I blew up some that I thought would fizz but instead they cracked, some rather loudly. I blew up bubbles in the centre, in the middle, along the outside. I went through a lot of matches and a lot of time waiting for more bubbles to return, just to explode them. I did as Joe does and learned to take the scum off without losing the charge from the water. I would leave the thing alone for a couple of days sometimes and come back. I did it for months and enjoyed myself immensely.

In the meantime I also learned that it is not too hard to burn the cones, and the water. A few times I have forgotten to take the power off to the unit and it produced some really vile looking green and inky black muck below the layer of brown sludge. I am talking about three distinct layers over half an inch thick each. And lovely clean water underneath.

I have learned that cleaning the gear often does not hurt. In fact I did find that the more often it is cleaned, and the more it is used in shortish bursts, the better the unit works.

And then one day I poked a match into a tiny little bubble, out by the edge, all by itself. When that went off there was an extremely loud "crackthud" sound and all the brown scum was blown off the surface of the water. All over the roof of the shed, one of the walls, and me. My ears had popped, implosion, duckz gutz. Naturally I was frozen in place. My lady wife and young blokes came running, "Dad, Dad, are you alright?" And there I am still standing there with a dead match in my hand and stupid grin on my face. Oh yes, friend, I was very alright.

As time went by I was able to get the water to a stage where I could get those sounds nearly every time. It was about then that I noticed the weather seemed to effect the speed of charging and also the types of sounds I could get. I have been able to detect five different sounds. Some explosions have bursts of orange flame, some blue, some bright golden yellow, and some have no flame detectable with the naked eye. Some are lightening speed and some just seem to make a sheet of blue across the entire surface of the water. I also began to notice that clouds could come out of nowhere when I was charging, and sudden wind gusts.

Yes, charging water and exploding bubbles was fun, and time consuming.

But I found out that I had been wasting time. For a bloke with one or two cells, a cone/keg rig is not essential, in fact it is really only good for having fun with, being a bit of a larrikin etc. It can also show the changes water goes through when electricity is applied in certain ways. Nice to have, but not essential, an option for you.

THOUGHTS on CELLS:

Well back to the story. So you want to know about cells. Wonderful things, and so many different ideas as to what constitutes a good cell.

The purpose of having a cell is to charge water to a certain state. By charge I do not mean getting it to a stage where we are producing gallons of gas, far from it. The purpose of a cell is not to produce gas. Gas is a by-product of the process. Gas bubbles can be, and are, used to identify the state of the charge of the cell and the water. We do not want too much gas. That is for the folks who can’t get a car to run on the Life-force. The charging process will provide enough gas to do what we want. More on that later.

Accompanying this manual is a drawing at the back of the Mark 4. The Mark 3 is almost identical. The only difference is that the Mark 3 has one extra neutral cylinder (pipe or tube) and is therefore an inch larger in diameter. It is also more expensive to build, harder to install in a car, heavier, and takes a lot longer to charge.

Joe intended the Mark 4 cell to be filled with water charged in the cone/keg rig. I have done it once or twice but no longer bother. A properly built Mark 4 cell is extremely capable of charging it’s own water, and in fact seems to prefer to do it that way.

It is my opinion, and not verified, that each cell develops it’s own frequency. And I also believe that each cone/keg rig has it’s own frequency. Why cause possible problems by adding water that

has been charged in a keg and may be at a different frequency to what the cell will try to get to on its own?

Problems are to be avoided. Your own cell technology needs to be kept simple until you are way along the track. Too many blokes never build cells because they get bogged down in the theory. Just build your cell. The theory can come later. I don't worry about what other people think of my methods, neither should you. OK, a scientist may well have good reason to say that I go about things backwards. But that is only from his perspective. From my perspective, and because I have no idea about science, my way of doing things is logical. If it turns out that the cell works, why bother about knowing all the theory.

Incidentally, I have not had a scientist tell me that I do things backwards. I did have a CSIRO scientist indicate that he was puzzled that I had so little knowledge of the science involved. But he also said that science does not recognize orgone as a valid subject, so he could not have known anything about it either. Caused me to wonder where he was coming from.

I have had another scientist tell me I work by intuition. Sounds fair to me. Thanks Alex.

So, my advice to you is to build a Mark 4 cell, don't bother with a cone/keg rig unless you feel like playing with matches.

I would like to reiterate, a Mark 4 cell is not only capable of charging it's own water, it actually seems to prefer water that is charged in and by itself.

I believe that when we charge water in a cell, over a period of time the stainless steel gets accustomed to being tickled by a trickle of electricity and actually comes to like it. And the stainless steel somehow develops a form of "memory".

When you build your own cell and are ready to start charging, you had better get ready to start watching. Watch for bubbles around the top of the smallest pipe. This centre pipe is the negative. It is also called the cathode. That is where you are first going to see bubbles.

The first time you hook a car battery to your cell you will most likely have to wait a minute, even longer maybe, before you see any bubbles at all. However, as your cell gets used over a period of time with lots of short applications of battery power, you will notice that even with new water the bubbles will begin to appear more quickly. My trusty old Mark 4 produces bubbles in new water in less than 10 seconds, sometimes in 2.

What about building a cell? OK, I will get on to that now.

Read on.

BUILDING THE CELL

I prefer to use 316 L stainless steel, and seamless if at all possible. But for starters, use anything you can get your hands on, just get started.

The first thing I really do need to explain is "cost". There is a lot of talk about cost. I have received numerous emails from people saying they are wanting to build a joecell and will get to it as soon as they have some money. Money? How much money? I'll tell you in a while.

Back to my cells. I built a Mark 4, because I had the bits. I built it and started charging it just to see if a Mark 4 would do the same thing as a Mark 3 was designed for.

There is also a lot of talk about using recycled stainless steel from scrap yards. I did that too. In fact my first cell was made out of scrap; it was as rough as guts and it cost me ten dollars. It was a combination of the Mark3 and the Mark 4. It had a 5 inch outer casing. That outside casing is your positive, or anode. But you know that because you have already looked at the plans at the back of the manual. And if you haven't done that yet, then maybe you had better do it now.

Getting back. Inside the outer casing was the cathode (-) and two neutrals. The cathode was 200 mm long, not 8 inches, 200 mm long and an inch in diameter. Because that is what I had. The first, or inner neutral was also 200 mm and 2 inches dia, but the outer neutral had horrible jagged bits on the bottom, was 5 inches long on one side and 7.5 inches long on the other. It had a diameter of 3 inches. In theory, and according to the books it could not work. Heh heh heh. But it did, sort of.

I had rammed a stainless steel bolt up into the bottom of the cathode. That bolt can be a mounting bolt to your vehicle, but more importantly for now it is the negative terminal into the cell. It must be insulated from the positive outer casing, and it must be watertight where the bolt passes through the bottom of the case. You will end up trying all sorts of things hoping to insulate that bolt and seal the opening. You may use combinations of things. You may get flash and have a custom-built bolt made, with flanges on it and specially machined insulators etc. Friend, that sort of silly business is overkill. I use rubber that I ripped out of wrecked cars at the local dump. There are beaut bits with holes in them that you can find in engine compartments. I have used bits of old inner tube and pieces of electrical conduit. If your bolt is the right diameter you may be able to use the white plastic (or PVC or nylon) olives that are used in copper pipe fittings. Try anything, try everything. Just do it.

Let me stress. With cells the major outlay is time. The hardware is not expensive unless you go high tech. I like to do it as cheaply as possible, because I have to.

I had come to believe that nice new stainless steel pipe was expensive. I thought I could not afford it. So in the end I priced some. I also found out that it pays to shop around. It pays to shop around because some stainless steel merchants sell it by the metre, others will sell it by the inch. Shop fitters who build commercial kitchens can be helpful, so can plumbers who do industrial work. Befriend a sheet metal worker, a lathe man.

It pays to look at what you want to build and what you can afford. I am very fortunate in that I have two very good mates who have also started building cells. Both these blokes have donated hardware to the cause. The major financial expense is the last one. That is good. It allows you the time to save up for the good bit that goes on top, or it allows you the time to decide to go low-tech, just to see if it works, and to save the bucks.

Most of my cells are all hand built. The books say get the materials lathed. Well that's fine if you live in the city. It also means more dollars unless you can find a friend of a friend who has a metal lathe.

Me? I use a hacksaw with new blades (that's flash), a file, and wet and dry sandpaper.

It is important to get the ends of the pipes cut off flat, no ups and down, cut flat so that when the pipe is sitting on a flat surface it stands straight up in the air. No leaning towers of Pisa please.

A hint for the hacksaw jockeys. To get a line around the circumference of the pipe, wrap a piece of paper around the pipe. Make sure there are no overlaps. The result is a mark that will yield a 90 degree cut. Now I usually mark the pipe with a ballpoint, but you could use a spray can of paint if you wished. When you start cutting, don't, repeat, do not, try to cut straight through. Sure as eggs you will run off line and end up with a horrible mess. What I do is just start gently sawing on the mark as I slowly rotate the pipe. Keep rotating as you keep cutting, then when the end drops off, lightly file off any jagged little bits, not forgetting to clean up inside the pipe where the saw cut will have pushed a wafer thin amount of stainless. I use a small chain saw file for this and finish with a few swipes of wet and dry.

Tools required:- hacksaw and blades, flat file, chain saw file, wet and dry sandpaper.

Now, the bottom. We have to have a bottom on the cell. There are cells with flat bums, others have domes and some have cones. I use flat bottoms because they are cheap, except for the original with the jagged bit. It came from a scrap yard and was a thin piece of 5 inch pipe with domed ends welded top and bottom. It had a piece of brass rod brazed or whatever they call it on to the centre of one domed end. I think this gizmo may have been a float of some sort.

I weld a flat round plate of stainless steel onto the outer case for a bottom. I use 316 L stainless electric welding rods with an ancient arc welder. This is not the preferred option, but it works for me.

That flat plate for the bottom. It might be helpful if I mention that it is a good idea to drill the hole in this before you weld it. First you will need to know the size of the hole you want. It has to be big enough to take your bolt plus whatever you are going to use for an insulator. And please, try to make sure the hole is in the centre of your disc. I have one that I drilled with my Makita, it is a quarter of an inch off centre. It still works, but it annoys me to know it is not as good as it could be. Fair dinkum, go to a small engineering shop, tell the bloke what diameter hole you want drilled in the centre, and 5 minutes later you are on your way home five bucks lighter.

That same bloke can cut your pipes to length, nice and square. He is also quite capable of doing any machining you need for your top. He can make press fittings from a dome or cone to the case. Get a quote off him, see if you can afford it. It can save you the time and give you a better result.

Time to wop it all together. Don't worry about the top if you haven't got it yet. You still have time, weeks of it, maybe months. Look at a set of plans. The ones from Barry's book or the one at the end of this.

Now you are going to need some insulator/spacers to go between the pipes. Let's get a bit professional here and call the pipes cylinders.

I used bits of car heater hose to start off with, then corks, and have finally settled on old oxy/acetylene hose. It is a little thin for my cell so I cut off little bits of timber dowel and ram them up the holes in the hose. This makes them nice and solid, and it works for me. Fancy that.

You should have cut that hose some where around 10 mm, long and you will need three for the top and three for the bottom for each gap between the plates. Naturally you will not want any for the bottom between the outside neutral and the positive case. The bolt will hold the cathode in the centre and you wouldn't have been able to get the spacers in the bottom anyway.

When fitting the spacers, fit them about half an inch below the tops and above the bottoms of the plates and try to keep them all at around 120 degrees, in line with each other for aesthetics.

Now plonk it in the case and insulate it and waterproof it. Please, please try to waterproof it by mechanical means, not goo. Use rubber.

WATER

The next step is getting the right water. That's what I said, the right water. Ideally you will find a nice spring out in the country. A place where water bubbles up out of the ground. Another good source is up near the headwaters of a nice clean creek. Where the water swirls and dances and gurgles around rocks, maybe down a waterfall or a series of cascades, an area where there are still lots of trees.

You want unpolluted water, and it does not matter if a cow has pooped in it, or if there is something dead in it. That is organic, and that is alright. It is chemicals that need to be avoided. Fertilizer, yuk, but that does not necessarily mean that the water is no good. If you live in the country you will know where to start looking. If you are a townie you can take the opportunity to have a weekend away camping in a national park or state forest in the mountains. Take water containers. Glass is best. Old flagon bottles with corks or rubber bungs are good. Be inventive, seize the opportunity, get the family involved and enthused. Start that now. Anyone who is regularly going to be in your car needs to get involved and enthusiastic now.

Your water has to be alive. It should have a bond with the earth, with the Life-force that causes this earth and everything and everybody on it to stay alive. Reich called this "orgone". I call it the Life-force, Alex calls it the Life-force. I got the name from him. I got a lot of good stuff from Alex. I also got his friendship, very, very precious.

Water. Rain water will charge but it will not hold the charge, so forget it. Tap water, about the same. We all think of rain water as being pure and fresh. But friend, it can have chemicals in it.

And it has been out of touch with the earth. The bond has been broken. That is the important thing to remember. The bond has been broken. The same goes for bottled water. Even if it says it is bottled spring water it is likely useless, and old and dead. Get the real stuff, living water. Now where have I heard "living water" before?

So, you are back with your water. Get your cell up on a bench. What name have you given the cell? Got to have a name. The cathode bolt should be poking out the bottom of the case. Get a piece of old inner tube, cut a small hole in it for the bolt to protrude through. This rubber is an insulator. You will have to mount your cell so you can easily and quickly get your electrical lead off the cathode. The top of the cell needs to be low enough to allow you to see down inside the cell, and watch what is happening.

CHARGING CELLS

Make certain the tops of the cathode and the neutrals are all level with each other before you start charging. For charging you can use a car battery or a battery charger or leads from a battery that is connected to your charger. If you do not have an amp meter, an old style battery charger with an amp meter built in will tell you what current the cell draws.

Before I forget, if you are charging with a battery charger, when you turn it off make sure to remove both leads from the cell, otherwise the cell may lose it's charge.

Now just add water. Fill to just below the level of the tops of the cathode and neutrals. Half a mm is just about right. OK? Ready? Hope you have your skinny home made set of jumper leads handy. Connect the negative at the battery or charger to the cathode bolt, and the positive to the top lip of the cell. You don't have a top on it yet. Now watch.

Within a minute you should be seeing tiny little bubbles rising to the surface between the cathode and the first negative. That is electrolysis, the very first stage in charging. Any dill can do this. Now power off. I only give a Mark 4 cell 3 minutes power at a time. After the first 3 minutes I am quite happy to charge again for 90 seconds every hour or so. But that is the way I do it and other people prefer to charge at a more sedate rate. If you apply power for longer than that you can expect to get a coating of brown muck on the surfaces of the cylinders. That will mean dismantling and cleaning and starting all over again.

I add about a quarter to half a cup of generic white vinegar to my water. It makes the water more conductive and helps to keep the metal surfaces and the water cleaner for longer.

After several applications of power, you will begin to notice some changes. If you watch you should see the water level begin to rise up over the tops of the cylinders. You should also be able to see small bubbles forming and adhering to both sides of the cylinders. This is as it should be. You may notice what looks like tiny little tidal waves racing around between the cylinders. And no doubt you will have also noticed some brown flakey bits coming up with the bubbles. You can wipe them off with a paper towel, just keep your fingers out of the water. Fingers in the water will discharge it.

At some stage you will realise that your water is dirty. That is normal. Filter it. I use 2 litre fruit juice bottles for funnels. Just cut the bottom off and place it over one of those big glass half kilo coffee jars or something similar. Inside the funnel you put screwed up or folded up paper towels or coffee filters. Now run the water through. You may have to do this a dozen times. The particles are fine but as the paper towel becomes saturated the holes in the paper get smaller.

Get your filtering done in less than an hour. Remember that water is partly charged. Keep your fingers out of it. Don't lose the charge.

After filtering and powering up again it is not uncommon to notice grey/brown flakes floating around in the newly filtered water. This has really worried me in the past. Lately I have found an answer, at least it is working for me at the moment. I ripped up one of my old cotton T-shirts. I used a quarter of it at the bottom of the funnel and the paper towels on top. It stopped the flakes. I suspect those flakes were tiny paper fibres, and that when the water was charged up again, they expanded.

Now about that T-shirt. It had been a faithful old thing, much loved and much worn. It was part of me and I was part of it. When I tore it up it was a bit smelly with my perspiration. I was going to write sweat, but thought, nope, they don't want to read that. What has a smelly old T-shirt got to do with it? Y factor. I was in that T-shirt, now I am in the cell

As you continue with the charging and filtering, you should notice that each time you clean your water the cell seems to be responding a little more quickly. And you will also notice that the bubbles are getting bigger. And you will hopefully know by now that some of those bubbles will remain on the top of the water overnight. Now if you decide to check your cell you will need to leave it unpowered for at least 24 hours. Take note of what the bubbles look like half an hour after you take the power off and then compare that with what you have 24 hours later. Hopefully most of the bubbles will still be there.

You will have noticed at the beginning of the charge process, (how long ago was that now) that on the first few power ups, mist or clouds of minute bubbles wafted across the top of the cell, up to about 4 inches above the water. And as time went by that stopped happening and you saw the surface of the water begin to rise and yet you could still easily see the meniscus between the cylinders. And eventually the water broke over the tops of the cylinders and now bubbles are getting trapped. They no longer launch themselves out of the water. They remain trapped. This indicates an increase in surface tension. This indicates that something is happening to the molecular structure of the water, or for those game to think about it, the atomic structure of the atoms that make up the water molecule.

Now that change in structure is caused by something. Electricity from your battery running through your cell and through the water is changing the structure of the atoms and is creating frequencies. When your cell is at about the right frequency, the cell is charged to stage 3., or conversely, when the cell is at stage 3, a certain frequency has been reached. And it appears that stage 3 is as far as you can charge a cell. However there is the beginning of stage 3 and there is the deeper stage 3.

With all charging it pays to watch what is going on. Sometimes, even at stage 3 it is helpful to remove the bubbles so you can look for the cell's pulse.

No, I am not joking, at stage 3 there will be a pulse. Some people are supposed to be able to see pulses in between all the cylinders. I only ever see them between the cathode and the first neutral. When the pulsing first starts I see 12 small areas where it looks similar to when you put a hose into a drum of water, with the end of the hose under the water level and pointing up. Now turn the tap on and adjust the hose so the water from the hose is just making the surface of the water burble. You will notice how the water from the hose seems to roll over on itself and drop to the bottom of the drum. That is what a pulse in a cell looks like, with a packet full of ever so small bubbles. Please do not confuse this pulse with electrolysis surge, they do look similar.

When I first get these pulses they come at the rate of about two per second in all pulse areas. Usually in the next charge that pulse rate has decreased, now you will not believe this, but it has decreased itself to my heartbeat. Not just the same speed, but synchronised.

Now that is what I call bonding. That will happen I believe, if you have a good Y factor going for you. And that synchronised pulsing is sort of supernatural.

Now not being a scientist I could explain what that means to me, but that would be giving the game away. You can work it out.

HOW IT WORKS / Y FACTOR

Right, so there I was filtering lovely creek water with a dash of vinegar and now a bit of me. I can hear the academics screaming from here. So what. My cell is part of me. I put a lot of me into that cell. I believe that it can do what I want it to do. I have bonded with my cell.

Now let's get real here. The cell in itself is just a conglomeration of pipes and rubber. It is only water and a dash of vinegar that physically goes into it. And then we apply a little bit of electricity. OK, what we have here is hardware. That is all it is, hardware. But there is something else going on. The hardware makes gas, but the aim is not for gas. The aim is to get the cell to a condition where it can attract the Life-force into it, and encourage the Life-force to accumulate in there until it reaches a certain potential. Our next aim is to encourage the Life-force to enter into the ugly bits of metal we call an engine.

By now you know we do that by using an alloy tube that goes onto the side of the engine. It does not go into the carburetor, it does not go into the manifold. It goes onto, onto is the key word.

Our aim is to encourage the Life-force to flow up the tube and through the metal of the engine and into the water jacket. We build a blank, or blind plug into our connection between the cell and the engine. The gas does not go into the engine. Hopefully the gas will fill the top of the cell and the tube all the way to the engine. And that gas has a certain electrical charge that does encourage the Life-force to flow.

The next step is for the Life-force to charge the water in the water jacket of the engine, and that water will then assist in making some changes to the materials the engine is made of. The engine and the coolant water actually change into something else. I do not know what it is, I do not care, I simply wait for it to happen.

All of this talk about Life-force may have started some of you wondering what it is all about. Do an Internet search on Willhelm Reich, or orgone. Read Alex Schiffers book. There is oodles of information available.

But I have another idea. As you may have guessed by now, I am not really a scholar, nor a scientist. But neither am I a complete dill. I can have some ideas of my own. I can rationalise. So can you.

It is time to go for the "what-if's". Let us accept that Reich was right (and no one has disproved him) and that there is an orgone field traveling around the earth. How did it get there? Do you believe that you can tap into that energy field? I hope you do. Because this is what the Y factor is all about. Alex Schiffer wrote about the Y factor. It does seem that most, if not all cell builders accept that the Y factor holds the real key to success with a cell of the Joe variety.

What is the Y factor about? On a very basic level it is about integrity, truth and honesty. It is not about financial gain. Some of us believe that the Y factor will never be "cracked". Some of us believe it has been put there for a purpose. Well if it was put there, how, who did it or did it just happen?

Many of us know, more suspect, that there is another dimension involved when we start charging up our cells. Some of us believe that we are beginning to move into that dimension as soon as we decide to become builders.

Anyway, it is your cell, not mine, so you are the person to do the thinking, ask the questions, and make the decisions. I wish you well in this.

A thing to possibly take note of. My cells would not charge properly until I realised that building cells with the goal of making money was not on. As soon as I gave up on that idea I became successful.

Lids and outlet pipes, look at Alex's and Barry's work. There is no need for me to duplicate it.

And there is something else I need to tell you. Take a deep breath. This might hurt. There is a high probability that you will never get to run your car with a cell and no petrol.

There has been a lot of hype about these Joe cells. They don't always work. No matter what you have heard, or been told, or read, Joe cells do not always work. In fact they more often will not do what they are built to do. There are experts trying to figure out how to make every cell work every time. I am not a scientist.

RECOMMENDATION

My recommendation is to go for the Mark 4. Joe originally built the Mark 3 as a cell that would charge it's own water and would then be installed in a vehicle. If my understanding of Barry's book is correct, that Mark 3 cell was meant to be wired to a small power supply. This was intended to maintain a charge in the cell at times when the orgone level is low, which I am told is somewhere around 2 o'clock to 4 o'clock in the morning. It seems that even Joe's own cell was losing its charge at that time, and 1.5 volts from a torch battery was seen as the answer to the problem.

And yet another "however". However, not all cells lose their charge, or leak. So if your cell does not leak you will not need to wire it up in-vehicle. I personally am dead against wiring them up in cars. If the cell does not leak it's charge it is a good one, if it does lose it's charge it is not going to be reliable even if you can encourage it to do what you built it to do. So then you have the option of starting again or trying to turn it into a gas producer. That is probably easier, but is still hard, and is not what Joe cells are about.

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CELL STAGES

In our experimental work on the cell, I have graded the cell types with a crude numerical system, ie. stage 1, stage 2 and so on. Let me refresh you in case you have forgotten or are a new player:

Stage 1:

A normal electrolysis cell doing what it does best, conventional electrolysis with the production of hydrogen and oxygen. This production of gasses follows the well known Faraday rules, namely more current , more gas.

Absolutely useless for what we are working on, and only of any use to people that still think that they can obtain more power from the resultant conversion of water to gas, than what the power requirement is to achieve the separation. I wish you luck, you will need it.

Stage 2:

The 'seeding' of the cell with the new energy. At this stage the cell is attempting to initialise the conversion process, but due to faulty materials or construction defects or water type, etc., etc., the cell will not 'catch' or enter its free running or breeding mode in the production of the energy. This can be equated to trying to push a child on a swing and pushing the swing out of synchronism (or with insufficient force) with the desired pendulum effect.

Stage 3:

The ‘breeding’ stage of the cell: The ‘seeding’ attempt was successful (the swing is swinging) and the cell is now accumulating and producing the desired energy. The output of the cell is greater than the combined design (or otherwise) losses, and the cell is useable although very temperamental and thus unreliable and not practical for commercial use. At this stage, the cell is a ‘laboratory queen’ and is only suitable for proof of concept type work, as well as the unreliable production of ‘anti-gravity’ and transmutation effects (to mention a couple). This stage 3 cell would suffice for the stationary running of a water-cooled power plant for example.

Stage 4:

The cell (as well as breeding) is now a reliable and commercially viable product. It is not affected by power lines and similar low level electromagnetic disturbances and is also far more immune to "Y" factors and similar external fields.

The most important characteristic is that the cell is not location specific. Of course, this attribute is exactly what you need from a reliable car.

This stage of cell operation is still heavily guarded by the very few people that ‘know’ the secrets of positive and negative potential utilisation and frequency resonance in association with the cell design.

If you stop and think and consider the staggering implication of the mass release of this energy to all and sundry, you may then realise why the game became dirty and free energy does cost money!

Please do not be surprised if these individuals do not knock on your door, and spoon feed you the details.

Stage 5:

This is really not a cell as such. It is the conversion of the engine, the water therein and the electrical system of the car, with the aim of achieving a cell type effect out of the engine itself. Of course this is also the obvious and logical conclusion for the experimenter that wanted to run his car on a cell.

To the best of my knowledge, you must have a water cooled engine to achieve this ‘enveloping’ engine field and thus it is not suitable for air cooled motors.

As you can easily deduce, if people are secretive with a Stage 4 cell, I don’t have to tell you how they guard a Stage 5 unit. However, if you know how to go Stage 5, they will knock on your door for other reasons.

There are many other types of specialised cells that are not relevant to this simple coverage, but I am simply making you aware that Stage 5 is not the end of the ball game by a long shot.

www.joecell.com/au (8-02-2002)

Update No. 5

The Joe Cell and ‘ Zero Point Energy ’

Zero Point Energy:

On the temperature scale, absolute zero is -273.15° C or zero degrees Kelvin.At this temperature, as there is no ‘ heat ’, the capacity for doing work (energy) should be zero.Some scientists do however agree that as the energy present at his temperature is not thermal, it is plausible that there is ‘ Sea of Energy ’ or an aether or similar that has short lived ‘ virtual ’ elementary particles capable of doing ‘ work ’.

Refer to Dirac (1930), Gamow (1966) and many others as well as a short mention in my update ‘ Negative Electricity ’ (10-12-2001).

A related book on the engineering principles for Free Energy is " Quest For Zero Point Energy " by Moray B. King ISBN: 0-932813-94-1, published by Adventures Unlimited Press.

Conservation of Energy:

To have ‘Free Energy’, we have to break some well established laws. But, laws are meant to be broken as and when better laws come along to replace the flawed existing ones. Thus the laws of thermodynamics and the conservation of energy are not set in concrete. If we do not assume that the physical universe that we are in is a closed system, we can introduce overdue revisions of present laws. The Joe cell is a conversion device that can ‘ cross ’ over this border or present day laws and extract and utilise the endless and unlimited energy that is all around us and that the majority ignore. Modern science has finally caught up, and now the concepts that the cell works on are not on the lunatic fringe, in actuality it follows well defined scientific rules.

Principle of all ‘Free Energy Devices’:

The devices that do tap into this energy stream all utilise similar principles. I will leave it to the reader to pursue other devices, but the present topic is on the most elegant (my opinion) and simplest device of all, the Joe cell. Please try to understand these three principles, as all device use them in some form or other.

1. We must have a system that is not in balance or is unstable.

Thus, if we have a stable system or a system in equilibrium, there is no reason for the system or cell to do work. Like a boulder that has rolled down from the mountain top, once it reaches the valley there it stays, static and in balance.

As Summers stated, " The energy from this storehouse (ZPE) is available to man free of charge in vast quantities by the simple method of changing the electromagnetic Balance ".

On the bye, he also stated that Orgone or Prana, is an AC electrical current pulsating at an extremely high frequency. Now that is interesting, keep it in the back of your mind for later use.

So for rule 1, our cell must not be in a stable state, it must be seeking an equilibrium or a more stable point just like a boulder in motion at the top of the mountain.

2. We must have a non-liner performance in the conversion.

This should be fairly evident, for what is the point of getting back a result that is equivalent to the work that we have put into to get that result. We must have an amplifying effect so that a very small input will return a far larger gain. For example, it should require a very small push on our 10 ton boulder to initiate an enormous amount of energy as the boulder seeks equilibrium.

So for rule 2, our cell must get beyond stage 2 (the seeding stage) and become a non linear converter or accumulator for the ‘energy’. Stage 1 or plain electrolysis is useless and if you stay at this stage, you will get either more or less gas production, period.

3. We must have our device (the cell) in a potential source of the energy.

This one is an easy one as all things on this planet are constantly surrounded by an endless energy field that only requires the right type of conversion device to utilise same.

So for rule 3, the experimenter does not have to make any provisions as the cell is in this field, as is everything else.

As rule 3. takes care of itself, we are left with rule 1 and 2.

The question is, how does the cell and the operator utilise these rules for the greatest benefit. In other words, how do we tap into the ZPE force?

Rule 1:

Think about it, what can we do to the cell to make it unstable or out of balance?

Well, here are some,

a. We apply a potential difference (our power source) across a non linear resistance (our chosen liquid)

b. This results in ionisation and electron flow that have different propagation rates.

c. This current flow results in the formation of a magnetic field and if done correctly, (due to the Lorenz law), this field will rotate.

d. The electron density is vastly different on the outer positive and the inner negative due to cylinder surface area.

e. The creation of numerous and very small bubbles. I see the key element here more the bursting (abrupt shock) of the bubbles rather than the creation of same. This I see very closely parallelling the sonoluminescence experiments and the resultant manifestation of blue light that results from these experiments.

f. The creation of compartments or layers of dissimilar physical characteristics. In our case stainless steel and water.

One or more of the above can break the at rest (stable and balanced) condition of the Zero Point Energy (ZPE) force in the vicinity of the cell. The disturbance of the stable state of the ZPE will create a reaction and this reaction coming back via our non linear cell will provide more energy than what was required to instigate the action.

Please note that this reaction can be a ‘push’ or a ‘shove’and the cell can both act as a source or a sink for different applications. Very important.

It is interesting to note that similar over unity devices by Meyer and Puharich also use a method to shock (with voltage pulses) the ZPE, with the result of non linear exchange with matter. In both cases water (thus ion flow in part) was the medium

As mentioned under (e) above, I very much favour the effect that results from the collapsing air bubbles.

Claudia Eberlien (Cambridge University, 1996) talking on sonoluminescence stated that a bubble of the minimum radius can cause an increase in value of a thousandfold and we are only talking about one bubble. I would suggest that this excess energy is from the ZPE field.

Rule 2:

As mentioned above, Eberlien, Mizuno and many other have shown anomalies with sonoluminescence experiments. These simply sated, were an excesses of heat far beyond any possible test equipment or laboratory measurement problems or anomalies.

Eberlien believes that the light (the blue light of Orgone in my view) is being emitted by the vacuum surrounding the bubble.

"Modern quantum theory holds that unseeable virtual photons (as mentioned above) abound in the vacuum. The behaviour of these zero point fluctuations is influenced by the properties of the surrounding medium".

Cheretski (1983) is another scientist happy with the above concepts, namely, "...vacuum energy can explain this mysterious effect. ...Emerging from below the ZPE level from ‘nothing’ and returning to ‘nothing’, virtual particles appear to defy the laws of conservation of energy".

As I have mentioned, if we remove the walls from this so-called ‘closed’ system of present day physics, we can readily introduce new laws to replace invalid old ones.

Another non-linearity is the speed differential between the ion current and the electron current in relation to the cell. There is a large time difference in the propagation velocity of the two and this time difference can be manipulated with suitable pulsing, or partial of complete potential reversals.

This effect can be utilised to cause the ZPE to be accumulated or added in our cells.

I have stated many times the example of the child on the swing and the importance of the parent providing the ‘push’ or impetus at the exact right time. Only with this synchronicity will the cell move from the seeding to the breeding or stage 3 cycle. And just as importantly, to go to stage 4, the push has to at least equal all possible external ‘friction’s’ or dampening agents on the cell.

Simplistically, I called the friction the leaking of the cell and our stage 4 cell can overcome these, but the stage 3 cannot overcome all possible interferences.

For additional information on the ion/electron effect, you may want to read Tom Beardon’s paper dated "Bearden on Bedini’s negative resistance effect --- 04-09-2000" and posted on Keelynet.

Power Supply

Preamble:

As you probably know, there are many speculations, myths, rumours, guesses and so on as to what constitutes the ‘right’ power supply. My manual is interpreted incorrectly by some, so I want to again reinforce what I did say, and not what some individuals think that I meant by those statements.

Let me again remind you that when Joe (and others) started their experiments with the intention of running cars on water, there were no fancy power supplies and the Joe Cell ‘effect’ was unknown.

It was simply a matter of making as much gas as possible and to do this, lots of current and electrolyte were the answer. I am going back 10 years and you simply have to watch a video of these early attempts to confirm what I am saying.

That is still the way to go if you want to generate gas. Commercial units are based on a lot of current, a lot of electrolyte, a lot of heat and a lot of pressure. It is not where we want to go!

The early power supplies were car batteries and/or battery chargers. The function of these power supplies was to electrolyse water and thus generate hydrogen and oxygen. No attempts were made to separate the two gasses and thus we ended up with a variety of gas combinations.

Depending on the quantity and type of electrolyte and also the current passed through the cells, we had the production of water vapour, steam, hydrogen, oxygen, Brown's gas and even atomic hydrogen plus trace gasses that resulted from the various chemistry used as an electrolyte.

It was much later that experimenters realised that it was not the known gasses that was required, but a mysterious gas or force that ran the car without the requirement of brute electrolysis of large quantities of water or even the gasses as we know them.

In fact, it was discovered that a very small current would suffice and that the water was not even consumed, as we were not interested in electrolysis for the sake of creating Brown's gas and thus running the car on hydrogen.

With the discovery of the 'force', methods were employed to increase the cells ability to run in this mode, i.e., to be a generator, transformer or accumulator of this energy.

Unfortunately as this force is not very well understood, cannot be readily seen or measured, the end result was total confusion.

It is only at this stage that the dimensions, power supply, materials and water became important. As you all know plain old every day electrolysis follows very well known rules and you only have to go to your nearest electro-plating concern to see the methods in use.

Two piece of metal in a plastic bucket, some electrolyte, connect a car battery to the metal plates, and hey presto, electrolysis!

The Joe cell is not an electro-plating device, in actuality we go to great effort to prevent the migration of metallic ions. As we are not interested in electro-plating, or the creation of hydrogen and oxygen, we go to great effort to optimise the cell for its chosen task.

People that think that you can simply connect the above said bucket to a car and then get free energy forever and ever, should really have their heads examined. Think about it for heavens sake! It is that easy, how come no one is doing it? Sheesh!

It is an art form, a skill, a special technique that belies the difficulties in the apparent simplicity.

For example, take a grain of wheat put it in light on a piece of wet cotton wool and Bingo!, we have a plant. Easy hey? Yeah sure! Do you realise the complexity of this simply result? The cell is the same.

Options:

There is a vast variety of possible power supplies, and some have been mentioned by readers and experimenters. Unfortunately, included in the suggestions is some very misleading guidance, deliberate or otherwise.

As I am not perfect and as I also do not know all the answers, all I can do is to offer you advice and methods that I have found that work for me. That is all that I would hope for from others.

This advice comes from years of hands on work, and is not merely theories that may flash through my brain whilst watching my favourite sporting event.

1. We must have some form of direct current, be it pulsations or an offset on the AC. It is IMPOSSIBLE to have electrolysis with a pure sine wave that comes from your power point! It make no difference if you are in the Northern of Southern hemisphere or how you hold your mouth to whatever. It is no go!

As a sine wave, be it 50 hZ or 60 hZ is equal and opposite for the same time in one 360 degree period, the current will try to flow one way for half to the time and the other way for the remainder. Equal and opposite and thus no electrolysis. I simply cannot understand why people insist that this will work, they simply could not have tried it.

Trust me guys, the people that recommend pure AC (no matter what the frequency) are wrong. If you only use a mains transformer, the output voltage, current or operating frequency abilities are irrelevant, you have pure AC and it will not cause electrolysis!

2. HOWEVER, if we have a resultant offset current, either positive or negative, this will result in periods of direct current that remains passing through the cell in one direction, and we thus have electrolysis. We must have some sort of unbalance.

This is simply achieved by rectifying the AC with a diode combination and not utilising the filtering capacitor to smooth out the ripple. The end result is a direct current with a very large ripple component, and if you look in any cheap battery charger, this is all the it contains, a transformer, diode and some protection circuitry and maybe an Ammeter.

3. The simple battery charger above, worked very well for many experimenters including Joe for many, many years. There must be hundreds of stage 3 cells that never saw anything better as a power source. Sadly when the cell will not go to stage 3, people tend to clutch at straws, to listen to the flavour of the month. This months flavour is the ‘ special ’ power supply.

4. Like all things, over the years the cell was refined and the power supply as well. As you know, we now have stage 4 and stage 5 working and who knows what next.

These later systems employ specialised power supplies. Before I tell you what I know on this, let me very briefly define the two basic cell utilisations.

A. The cell is designed for car work and as such it will be running from 12 Volts. I will remind you here that the reason I chose 12 Volts at 1 Amp as a standard are two fold.

One was, that the Ammeter on the dash in Joe’s car whilst running on the cell indicated 1.25 Amps.

The second was my hope that if everybody used the same standard (12 Volts, 1 Amp), we could swap experimental data and thus achieve our aims sooner. This second aim was a complete flop as in general, people simply do not want to share.

As the cell has to run on 12 volts, I found that some water simply had insufficient conductivity, (too much internal resistance) and would not pass sufficient current for the desired effect. Thus I (among many others) started experimenting with electrolytes. This is not a desired feature but a case of necessity. Obviously, if you can get enough electrolysis with 12 Volts, you do not have to add anything to the water.

But, dear reader, I would just about guarantee you that in the above case, the water was so full of natural or man made electrolytes that the addition was already done for you.

And that goes for dear Joe and him not using electrolyte with 12 Volts.

B. The cell is designed for other non 12 Volt related applications. In this case you definitely do not want to use electrolyte, as you can tailor your power supply to deliver the exact current required.

Joe is using this method to start the cells of visitors and also to go to stage 4. His supply has the ability of supplying far more than 12 volts and thus no electrolyte is required. In this case it can be said that Joe does not use electrolyte and this is correct, as now the statement is not taken out of context.

The supply:

In Joes words and loosely translated, "...I have made a power supply that seems to adjust itself to the frequency that is required by any cell..".

The above is all well and good, but I am sure that like myself you would love to know how to do the above, whatever it means.

As you have read down his far, you will have realised that I am stating that the shock or impulse that allows our cells to work must be of sufficient magnitude and must have the right periodicity for us to initially ‘seed’ the cell and then to keep repeating this push or shock at the right frequency to allow the ‘breeding’ process to continue. Additionally, the shock or pulse has to be of sufficient magnitude to overcome the cells natural tendencies to ‘ leak ’.

Now the above is a big ask, and various experimenters on many systems have been trying to do this for years. Joe for one, by utilising a simple and cheap second hand ex-Telecom power supply can do this and this can be duplicated by others. After knowing the tricks that is.

Joe doe not use any additional components (to the best of my knowledge) he simply rewires the circuitry around the primary and secondary of the transformer. This power supply modification allows the cell to work in stage 4 mode.

Let me state at this point that any modification of power supplies or mains connected appliances is DANGEROUS because it can be LETHAL!!!!!!

There is not many more dangerous combinations than water and electricity. I am not advising anybody to modify anything or to tamper or change any mains connected appliance! Far from it.

I am simply repeating what others have done with the aim of passing on experimental knowledge to people versed in the required arts. Moving on.

Joe is convinced that we are using electricity incorrectly and that we are only using the 'positive'. In his view the modification to the power supply are made to utilise the unused ' negative '.

In closing, a normal power supply will get you up to stage 3, and if you cannot get this far there is no point in endangering yourself and other by making possibly lethal modifications.

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www.joecell.com/au (10-02-2002)

Update 6

The Joe Cell and the ' Y ' factor.

Definition:

The 'Y' factor is the ability of the operator (or any radiating body in the near vicinity), to interact with the device and cause either an enhancement or diminishment in its desired performance.

I have named it the 'Y' factor for 'you' after Reich suggested that his Orgone motor required a 'Y' factor for its correct operation. As Reich's documents are still locked away and thus unseen, I cannot guarantee that definition from Reich's point of view. It remains to be seen if we have the same definition for 'Y'.

General:

What the experimenter really should know is, what proof is there in science that an organic structure can interact with a non organic structure. Or put in simpler terms, can the presence of a person affect the outcome of an experiment and vice versa?

For the well read amongst you, there is a resounding yes to the above question as it has been proven thousands of times in metaphysical type experiments such as spoon bending, mediumship, alternative healing and the feats of certain religious groups.

However for the sceptical, once bitten twice shy individual, the above are merely non scientific sleight of hand, fraud, trickery, coincidences, chance events or freak occurrences and can be easily debunked by such great 'Gurus' as the 'great ' Randi (the debunkers' God).

It would be nice to have solid proof from the scientific fraternity, to at least show your doubting friends and/or to give even you dear reader a bit more faith in the phenomenon.

Quantum Physics:

Basically the theory that energy does not have continuous range of values, but instead it has a discontinuity and this energy is composed of finite units called quanta.

By this science agrees in the main to the theory, that our world is not a continuous construction nor is it solid. On the contrary our world actually 'exists' as short and rapid bursts of light or quanta.

From the above it can be easily deducted that as the world is not solid or as it does not have a continuous existence, then we can have 'magical' events where objects can appear or disappear and where time can be gained or lost.

In actuality, an outcome called the 'Bose-Einstein condensate' allows for two atoms to occupy the same point. These events have been observed and even seen with the naked eye as well as being photographed. (Satinover 1997)

As the above in practice would allow for the concept of parallel universes, we can see the far reaching implication of our Joe cell and the source of the cell's power.

In passing: Hugh Everett from Princetown University covered the above topic in 1957.

I introduced Quantum physics to show you that the 'Y' factor can be acting on several dimensions and in years to come will have a very logical explanation for the effect. Similarly, it shows that what we call reality is not as ' firm' or solid as we believed it was.

This was known thousands of years ago with the 'Maya' concept, stating that we live in an illusion that we call reality, and our scientists have merely rediscovered a very old and well trodden path.

Matter:

As quantum physics start to shatter the illusion of what we call reality, it comes down to the question of what in actuality is 'matter'?. For if there is no continuity or 'solidity', including the Joe Cell or us, where does it leave the established laws?

Let me quote you the great Max Planck, a Nobel prize winner:

"There is no matter as such! All matter originates and exists only by virtue of a force which brings the particles of an atom to vibration and holds this most minute solar system together....We must assume behind this force the existence of a conscious and intelligent mind. This mind is the Matrix of all matter".

There dear reader you have the crux of the situation. If there is no matter as such, and if matter is held together by the conscious mind, then we as part of the same construct (conscious mind) interact with all and everything.

As I would rather stick to science (imperfect as it may be) then wade into the depths of religion (a no-win situation in any debate), I will leave it at that for you to ponder on if you so wish.

Let me show you only a few examples of the type of interaction on the scientific level that may suffice. It follows that the action can be from a device to a human as well as from a human to a device.

Examples:

A. V. Chernetski, Moscow 1983, from the book '*Systems of Plasma with Separation of Charges*', page 91: Figure 10 shows the reaction of the human body to the operation of devices utilising the Zero Point Energy (ZPE). In this example there is scientific proof of a device affecting the operator in very specific ways.

Viktor S. Grebennikov, Senior researcher, Russian Academy of Science. From the book ' *My World* '. Like the first example, Viktor talks about many side effect whilst on his ' anti-gravity ' platform and whilst near certain shape forms.

Included in the above are some simple experiments that you can do at very low cost, and thus prove this factor for yourself.

Glen Rein & Rollin McCraty, Third annual conference of the International Society for the Study of Subtle Energies, 1993: It has been shown that emotion can actually change the physical molecule of DNA. " individuals trained in generating focused feeling of deep love...were able to intentionally cause a change in the shape of the DNA ".

The above shows that a controlled though can alter something. By logic it would follow, that the state of a person is also some form of ' at rest ' energy field and this field will also interact with other fields.

Richard Broughton, Director of Research at the Institute for Parapsychology in North Carolina: In his analysis of contemporary psychokinesis research, he proves conclusively and beyond any doubt that people can interact with inert objects and get these objects to perform as directed by the scientists.

Again, it is only a small step to make in me saying that the observer that you invited to watch your Joe cell at work, will have a unique ' output ' that he may not be aware of.

I am simply saying that a mindset can disturb your experiment by reacting with the cell in a positive or negative way.

Experiments in Distance Influence. L. L. Vasoliev, Professor of Physiology as the University of Lenningrad. A good read with many examples of recorded scientific experiments of deliberate manipulations of various devices. This book also supplies some characteristic of the ' enemations'.

Beyond Telepathy. Andrija Puharich, Neurologist. Another very comprehensive 'scientific' proof of the ability of humans to interact with so called passive devices.

In a nutshell:

I can quote you books upon books of documented mind over matter scientifically observed and carried out experiments, but it is not my job to convince you of anything. I simply bring it to your attention, to use or abuse, believe it or not.

Your conclusive proof is as close as your nearest library and the effort that you are prepared to make to attain knowledge.

Some points that may be worth considering:

1. Mankind simply does not 'know' anything. We only have theories and these theories are constantly being upgraded as new experiments refine our knowledge. As such there is no theory or law that is set in concrete. We simply do not understand all the possible variables to be able to formulate definite and thus unchangeable laws.

2. As we only have theories, for someone to say that it is impossible for the external environment to affect a Joe cell is pure nonsense. Of course if they were prepared to prove it, hey!, we have a new ball game.

3. As we are part of the environment and are 'broadcasting' a whole range of frequencies, it is not too outlandish to suggest that these frequencies may interact with the frequencies of the materials and their operation, that makes up the Joe cell device.

4. If point (3.) above is plausible, it follows by logic, that this interaction may be additive or subtractive in such a way as to make the cell function 'better' or 'worse'.

5. The end result is, that the human as well as the natural and man made complex frequency bands (and harmonics resultant) is a very important consideration in the research on subtle energy devices.

Summary:

Science has proven that there is no such thing as a firm/solid reality. Science has also proven that there is a two way interaction between all things (on this planet at least). That is a fact! That is also the 'Y' factor.

I would strongly suggest to the serious experiment to be aware of the 'Y' factor and not treat it as some sort of fairy tale.

Simply because the majority of 'sheeple' on this planet are only aware of what is purported to be 'fact' via media releases and similar, it is very easy to throw away the baby with the bath water.

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www.joecell.com/au (5-03-2002)

Update 7

Stainless Steel and the Joe Cell.

Introduction:

I am including more information on the stainless cylinders and their preparation and treatment.

My aim is twofold, firstly to clear up some of the misconceptions that seem to have entered the arena.

Secondly to add new material that may further help the experimenter.

Stainless Steel:

There is nothing magic about stainless steel, or the reason that we use it in the cell.

We use it because it is reasonably inert to the electrolysing process and far cheaper than titanium, gold or platinum, the last mentioned being the perfect choice but simply too costly even for Universities (in the quantity required).

So as we are making a cost compromise, we must be prepared for problems that result from not using the optimum material. And the stainless does have many problems.

Types:

There are many types of stainless steel and they fall under three broad categories:

1. Austenitic. These contain chromium and nickel as the main percentage of the alloy. Type 302, 304 and 316 are typical examples.

2. Ferritic. These contain mainly chromium and ferrite. Type 430 is a typical example.

3. Martensitic. These are low carbon steels containing mainly iron and chromium. Type 410 is a typical example.

As we are only interested in 'non magnetic'stainless steel, we are interested in the austenitic or type 3xx variety and more specifically type 304, 316 or 316L.

Of the three mentioned types, 316L has superior corrosion resistance to chemicals and is the most common type used by Joe cell experimenters.

As said previously, I use it as well, but I am quite partial to the cheaper 304 (food grade)

Quality:

I could write volumes here, but basically you get what you pay for.

If the steel is not wrapped in a plastic sleeve, does not have regular type identification numbers on it, shows a longitudinal discoloured weld seam, is thicker at the weld seam and is out of round, do I really have to tell you that you have got an inferior (and thus cheaper) length and that you should not even bother taking it out of the rack?

Now the above are 'first impression' things that you can do with your hands still in your pocket.

If your steel does not have any of the above traits, it is time for the trusty rare earth magnet. I have described the test procedure before, so I will not elaborate.

For the lucky (read, with money), seamless steel that is extruded is the way to go and you increase your chances of success by quite a large margin.

If you were wondering, no, I cannot afford it and I use what I can get.

Okay you say, my steel looks great, tests great, do I have a piece for the construction of the perfect cell?

Sadly no, for there are yet many hurdles to jump. Read on.

I have mentioned over and over that the Joe cell is the most deceptive device of all, it looks so simple to make, it has so few parts and yet less than a dozen (known experimenters) can make it fly.

I would love a dollar for all the hours of frustration that experimenters around the world have poured into the cell, I would have to be a multi-millionaire and quite a few thousand of that would have to be my contribution. If only the people who 'knew'would share, now what a wonderful world that would be.

The ‘ right ’ Stainless Steel:

Additional to the above type and quality of the stainless, we enter into the world of pseudo science or at least science that is not taught in Universities and such like.

Let me give you a few examples:

1. A person that could not get his cell going took it to Joe. Joe simply moved the position of the positive connection to the cell on outer case and it commenced working.

2. Another person took a non working cell to Joe. Joe told this individual that the two inner cylinders were "upside down".

3. Another non working cell was taken to Joe. Joe drilled the minutest hole in a critical area and the cell sprung to life.

4. A person was walking down Joe’s drive-way with his $6,000 dollar purchase of the ‘right’ steel. Before he got to Joe, Joe told him it was ‘crap’ and to take it back.

5. To get the ‘right’ steel keg, Joe chose out of 200 beer kegs and even now only has one keg that will start up in exactly the same mode each time.

6. When your cell does not work, Joe recommends the ‘flashing’ of the cylinders to set up the right

‘Field’:

The above examples are some that come quickly to mind, there are many others.

So dear reader, you have read the above, what do you make of it?

I will tell you what I make of it and it is all bad news for a ‘quick and easy’ project.

a. There are obviously complex atomic and sub-atomic characteristics that are involved.

Additionally there are magnetic, electric and aetheric interactions at a very subtle level.

b. There is some form of tuning involved that is not measurable with conventional scientific methods.

c. Some people can ‘see’ and thus make or correct components by ‘intuition’ or ‘gut feeling’.

Summing up a. b. and c., I read that scientific methods alone will not make a cell work nor be able to explain the operation. But then you knew that.

Back to the stainless, what can you do to at least enhance your cell’s ability to ‘do’ something?

Suggestions:

1. It goes without saying that you should get what has worked for others. Definitely 304, 316 and 316L has and is working for experimenters.

2. Make sure that your chosen cell passes the tests as mentioned previously and above.

3. If you cut the steel, use a low temperature process and a cutting method that does not inbed foreign material in the cut. Read my previous notes on the subject.

4. Make sure that the length of your inner tubes are close to the same length with parallel cuts top and bottom. Very easy to test at the machine shop before you pay your good money, simply place on a flat surface and hold a metal ruler on edge across the top. This little test tells all.

If your cylinder set has just come of the lathe, there are no excuses for sloppy work. If you have made a set at home, please realise that the length has to be reasonably the same, in actuality only the top surface of the cylinder pack had to be dead level, the odd length can 'hang' out the bottom.

A little trick, if the one inch tube is higher than the rest, it can 'see' over the top of the others and your cell is dead! Far better to lower the central tube a smidgin and thus it will be 'blind'.

The above is easily observed by filling the cell to meniscus level and observing the bubble pattern.

5. If you have to polish the tubes, be very careful! The polishing lines must not run at an angle to the circumference of the tube. I have mentioned this before as it is hard to do inside the two inch.

What I have not explained is exactly how to 'clean' the stainless tubes before using.

This now follows:

Passivation:

This is a generic term used to describe the process of removing free iron from the surface of the stainless. If not done, the surface may exhibit the 'rust spots' that most builders complain about.

The process should remove the surface contamination without significantly affecting the stainless steel itself.

It is the addition of the chromium that makes the steel rust resistant by combining with the oxygen to form a very thin and invisible layer of chromium oxide.

This is called the passive film.

So, as you busily polish your works of art, you are also removing this thin chromium film and exposing the iron to the air and thus you have rust, the brown spots that we are all familiar with.

No, don't slash your wrists, the cure is very simple.

Methods of Passivation:

The commercial method involves the submerging of the steel in a solution of nitric acid (20-25% by volume) and sodium bicarbonate (2-3% by weight) and 35% of water.

The steel is submerged for 20 to 30 minutes and the nitric acid dissolves the iron and restores the original corrosion resistant surface.

Dear reader, nitric acid is not very friendly, expensive and not easy to dispose of. Leave this method to the professionals.

For home use I would suggest citric acid that is easy to get and is safe and easy to use. A 4-10% by weight solution in water works just fine to passivate, clean and brighten just about any stainless steel.

The time is about the same as for nitric acid and as you should not be in a hurry, 30 minutes is fine.

Rinse in NON tap water (your favourite mix) and they are ready for assembly.

Electropolishing:

As you are by now the proud owner of a power supply, various containers and other equipment as used by those ' familiar with the art <g> ', you may be interested to try and do your own electropolishing.

By using oxalic acid (your wife may have some for dying cloth) or by using phosphoric acid (if you have made Go-Juice) as an electrolyte, and a bar of copper as your cathode (negative) you are ready to go.

Your stainless steel has a positive lead clipped to it and the copper bar or rod is your negative. Put them in a plastic bucket or similar and adjust the concentration of the electrolyte until you get decent action with your power supply of battery.

Bingo! All the cruddy heat tint and similar are gone forever.

Conclusion:

Even after purchasing you super expensive bit of seamless stainless, lovingly prepared by the vestigial virgins in the Black Forrest, it still may not work.

This is due to the molecular alignments within the metal and the interaction with the subtle fields in the near vicinity of the cell.

I would suggest that you do all the previously mentioned operations and then ‘flash’ each tube before assembling the cell. If a certain tube does not produce bubbles from both surfaces or does not seem to take part in the action, try turning it end for and/or rotating a ¼ of a turn at a time.

When you have your tubes perfectly aligned mark this position with some form of indelible mark. A tiny pin punch mark on the bottom cut edge is fine.

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www.joecell.com/au (July 2002)

Update No. 8.

Aim

The purpose of this update is to compile all the known factual and proven data on the cell in relation to car operation only.

This data is not simply based on "Joe said, Alex said, etc.". It is based on conclusive empirical tests that have been replicated by at least two or more cell experimenters.

There is an immense amount of speculation, disinformation, wishful thinking and wild theories that are circulating the Internet.

Just like UFO sightings the above achieves derision for any factual sighting or successful cell experimenters from the so called scientific peers. Thus the experimenters are divided, shamed and mocked into clandestine research and minimal reports.

And so the aims of the controlling minority are achieved yet again.

I have done my best to present the facts from my daily cell research and contacts with successful researchers. This is given to you freely in the spirit of sharing and brotherhood.

Needless to say you have to treat this update with equal suspicion as any other set of radical claims. That I would expect from any logical, scientific and open mind. I am always receptive to positive criticism.

Introduction:

I see that the majority of individuals have a desire to ‘run’ a car on a cell. Although there is a multiplicity of far more noble uses for this accumulator or converter, I will provide the information slanted towards that desire.

As we should all know by now, the success of the above desire can be broadly broken up into 3 main stages.

1. The cell.

2. The transfer from the cell to car.

3. The car modifications and conversion process.

Thus the known facts on the above will be presented under these three headings and in no particular order of importance.

The Cell:

* The power source for the cell can be a battery, batteries, power supply or similar. There is no need for the latest 'special' power supply to achieve stage three. I cannot stress this enough, as recently there has been deliberate misinformation stating that only a 'special' power supply will do.

If you look at this matter historically, Joe stared his research in 1991 and in those early days he only used a 12 Volt car battery, and later on a Telecom 75 volt 50 Amp battery charger. These are the facts.

Personally with my modest successes, I never had the luxury of this 'special' power supply.

Of course I would like the schematic as how to make one, but the anal retentives will be what they are, retentive.

You can be assured that the day I get it, the next day you will have it, and that is the reason that nobody is talking to me.

There is no need for special filters, huge smoothing capacitor, complex wave shapes, special 'secret' frequencies, special Zener diode networks, impossible AC 'charging', 'turning' around the negative, or any similar gobble gook.

Yes, for an advanced researcher Joe's new power supply will start just about any cell and on just about any water, but it is not vital to have one to prove the basic concepts of running a car on a cell.

* A properly working cell will keep all the cylinder surfaces clean. On the application of power both surfaces (except the outer positive and the inner negative) will have a gas production of very fine bubbles. This is aided by having all surfaces highly polished.

Yes, inside the cylinders as well and not just the easy to do outsides.

* No surface tension is a very good indication that your cell is not working properly or at all.

* The personal ‘polarity’ of an individual Will definitely interact with the cell in the crucial seeding stages. This may help or deter or completely stop the seeding process.

* An easy way to test if the cell is breeding is to light a bubble and observe the effect. That is the only use of the bubbles to us, for the car does not run on the bubbles. In actuality, charged water (without power applied) does not have visible gas production and it runs the car just fine.

NOTE! Be extremely cautious lighting any crystal clear long staying bubbles (a day or so old). These little fellows contain an incredible amount of ‘energy’ that can cause severe damage over a large area on being ignited. Don’t say that I did not warn you!

* There is no need for electrolyte in most instances. The need for electrolyte signifies a cell problem or very low voltage. By increasing the voltage applied to the cell you can make any cell start seeding (all other parameters being okay that is).

In actuality the breeding cell will reject all impurities (including the electrolyte) from the water and this will be the commonly observed sediments that are seen in the cell in various locations. Once these impurities are removed, the water will remain crystal clear.

Note. Some water will continue to release chemicals. I decided with one cell to see exactly how much and how long. After 3 months the cell was completely filled with sediment (to the very top), there seems to be no end to it.

Solution? Change the water type and try again. You may have to try dozens of water types before you find the ‘right’ one for you and your cell.

The big advantage of using the vat is that the impurities stay in the keg and you remove the clean charged water and use it to fill the car cell

So if you have used electrolyte and have not ‘cooked’ the cell, as the cell starts to seed and then breed it will self clean and reject these ‘impurities’ and still end up a working cell.

All that I am pointing out is that with a higher voltage, electrolyte is not required.

Please note: Incompatible metal, excess charging time and excess currents will deposit the actual metals of the cylinders themselves. Simply stated, you have ‘cooked’ the cell, pull it apart, start again.

* I must have said this hundreds of times, we are not interested in electrolysis or the generation of hydrogen and/or oxygen, thus we are not interested in large currents, and extended periods of ‘ charging ’ time.

If there is no sign of the ‘right’ activity within one minute (at the longest), stop. Change something and try again.

You may get the cell breeding first time or after months, or years. If it does not work, change something, there is no point in giving it more power or charging time. Sooner to later, you will strike the right ‘ frequency ’ (as Joe calls it), it is a matter of observation and persistence and the right mindset.

If all fails, check you body polarity, you should be ‘ positive ’. If not, you can temporarily flip your body potential and (if this was the problem), the cell will now perform for you.

I have written down the procedure in my manual (there is a free copy on the web).

You may laugh, however this is an often proven ‘cure’.

Read, experiment, share. The aim of these notes are to help you on the path to success.

* The water level must be above the top of the cylinders for the cell to work properly. A working level of the water above the cylinders of 1/8 to 1/4 of an inch is fine for a start.

* The insulators have to be seen as performing a variety of functions;

A. An insulator of high resistance to conform to Ohm’s law.

B. An insulator to prevent the ‘short circuit’ of the special field that do not conform to Ohm’s law.

C. As a rigid support member to support the cylinder stack.

D. As a precise spacer to retain the cylinders in accurate concentric orientation.

* The only proven cell materials that work are 316 or 304 (food grade) stainless steel.

Yes, I know that people have brass, copper, aluminium and even precious metal coated cells out there. In 8 years, I have not heard of one person that has a car running on an alternate metal cell, and by that I mean a car running on a cell alone and not a shandy of cell and petrol.

If they have, they have not bothered to share it with the rest of us. and in that case there are more than useless to us, themselves and society as a whole.

It is very important that the stainless is seamless or at least not to have a residual magnetic field discontinuity on the weld, or anywhere else for that matter.

During the early and very delicate seeding stages, the cell relies on creating its own spiral magnetic field. Any residual magnetism will fight the establishment of this field by the cell. That is the reason that the initial material must be non magnetic to a reasonable degree.

A very simple indicator that you have a ‘ magnetized ’ seam is that the cell will develop a fine black vertical line at the problem area. Additionally, if there is a bad field discontinuity, it will

also create a fine vertical black line on the opposite side to the trouble area. If you have a faulty cell, dismantle it, let the cylinders dry naturally (do not wipe the water off) and have a careful look.

If you have these vertical black lines, that cylinder is no good, get it heat treated or throw it away.

Once the cell establishes seeding and then breeding, it can cope with external magnetic fields to some extent, as it now has set up it's own permanent field patterns.

Like all devices of this type, the starting of them is the hardest and most critical part of the whole procedure.

* The charge remains in the water and the transfer of this water to another non-working cell, (or the car cell) will start up this new cell. This is on the proviso that the new cell is a suitable candidate.

The Transfer from the Cell to the Car:

* For the zillionth time, WE DO NOT run the motor on hydrogen or oxygen, or their injection into the intake side of the motor. I am always amazed as to how many 'experts' analyze the cell operation as if it was some sort of hydrogen gas generator. It is not!

WE DO NOT have any direct opening from the cell to the vacuum side of any part of the motor. We use a blanking plug on to the side of the motor or on the intake manifold, carburetor or similar.

Sometime (rarely) a very small hole is drilled in the blanking plug if it is connected to a component that may have vacuum on the other side.

Rarely!

* A breeding cell does not require power to be applied to it after a successful car installation.

Periodically, power does have to be applied to a leaking cell and/or during the conversion of the car and its contents (and occupants).

In fact, once the car is totally 'converted', the cell can be removed completely.

* If the cell is not 'stable', and if power is applied to it in the car, the cell may start in a different 'mode' each time the ignition (power to the cell) is turned on. Needless to say, the reliability factor would drive a person insane.

Power to the cell does provide more power in some situations, but you have to be aware of the above shortcomings. If (and that is a big if), you had a stable cell, this cell would start up in the same mode each time and the above problem would not exist.

It is wiser to fill the car cell with charged water on a as need basis and not to connect the cell to power in the car. If however the geometry, or location and such like of the cell is unsuitable, the charged water will be ‘discharged’ in a relatively short period to time. You will have to play the game by ear, yes, it is called experimentation.

Sooner or later, you will find that the water remains charged, the car remains charged and that the car is reliable in any location over long periods of time. As this goal has different solution for different combinations of car and occupant/s, there are no clear cut rules that apply to all situations.

* It must be realized that when the car is running on the cell, the butterfly of the carburetor become an air quantity control and so it is the ‘mixture’ control for the 'air/force’ mixture.

Normally (on petrol) the mixture is a function of jetting and the butterfly is ‘how much’ of the optimized mix you allow the motor to intake.

The above is one of the reasons of not having the cell operating on idle, as the air flow may be insufficient to provide the right mixture.

This is very important! It explains why the car may ‘take off ’ as you remove your foot from the accelerator and then stumble when you put your foot down.

You will have to rethink the role of the accelerator to overcome any problems in this area.

The above is also the reason that the Rover (using a Zenith, a form of S.U. carburetor) works so well as we have a constant displacement system. The needle and so the fuel quantity is controlled by the lifting of a tapered needle under vacuum control.

Conversely, in a normal carburetor the mixture comes from a variety of jets that provide differing quantities of fuel under vacuum control. Sounds the same but it is not.

The car modifications and conversion process.

* Joe’s first car and easy conversion was a Rover 3500 SDI. This motor is a ‘natural’ for cell conversions.

If you have a stationary installation (a test stand motor), re-read the above note on the function of the butterfly.

* The converted car will display some very bizarre effects;

A. Radiator can totally ice up.

B. Cold white mist comes out of exhaust and sometimes the exhaust will have ice on it.

C. Virtually silent running of motor and exhaust.

D. Unreasonably and normally impossible engine RPM, either abnormally high (over 10,000 RPM) or low (1 RPM). Believe it or not.

E. Various problems with the oil that is in the engine, i.e., it may try to escape in any way possible.

F. Weight loss of vehicle (partial or complete).

G. Various electrical failures of car instrumentation.

H. The motor may only idle and not rev out, or it will only run under load and not idle.

I. And of course, no fuel required to run the motor.

* Large timing changes are required to optimize the motor on the cell. For example the Rover required 80 degrees advance (distributor degrees). On non aluminium motors, you will do these advance changes on a progressive basis as you reduce the fuel quantity.

* On non aluminium motors the conversion to cell has to be done following a set procedure. Basically a charged cell has to be in the car first to partially 'charge' the motor, and then slowly the fuel intake to the motor is reduced by either jet blockage or reduction or similar and then eventually the fuel is completely disconnected. At each step the appropriate advance adjustment are carried out.

This process may take days or even weeks.

So, with non aluminium type motors you cannot simply turn off the fuel source and then expect the cell to 'kick in' and run the car.

When I was working on cars, I installed a cell first and drove around for several weeks to acclimatize the car. Only after that did I try any conversions. During this acclimatization period the cell will tell you when it is ready.

It is not a simple conversion as on the Rover, where the fuel can be disconnected and the cell takes over and the motor is then optimized by ignition advance adjustments.

* The location of the cell is reasonably critical. Any locations adjacent to strong magnetic (and thus interfering field) must be avoided. This would include starter motor cabling, ignition wiring, ignition coil, distributor, spark plug wiring, electric fuel pump and wiring, windscreen wiper motor and wiring, electric fan and wiring, air conditioner clutch and wiring, alternator and wiring and similar devices that require or produce electromagnetic field.

* As mentioned in the cell section, a person can have an 'negative' polarity, and an onlooker or passenger is able to stop the cell from functioning. Fact.

Conclusion:

The above is some of the known cell/car data that I have and that I have either personally witnessed or have received from more than one trusted and reliable source.

If you can add facts to this list that will assist your fellow experimenters, what is holding you back?

If you want to give your favourite arm chair theoretical discourse, please don't bother, I personally am not interested, there is enough confusion already.

If you disagree with any of the above and can prove otherwise, please do so, for that is the reason for having the Joe cell discussion group.

I (and my sources) are far from infallible.

In the spirit of sharing and research I wish you all success.

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http://pesn.com/2006/04/13/9600257_Bill_Williams_threatened/ (April 13, 2006) ---

Joe Cell Truck Builder Threatened, Destroys Plans

After announcing that he had successfully built a truck that runs on Joe Cell technology, drawing energy from water and Orgone, Bill Williams said he was approached by two men who demanded that he stop his research, threatening him with dire consequences if he didn't. Others are keeping it alive.

by

Sterling D. Allan
Pure Energy Systems News

Joe Cell

USA -- A couple of weeks ago, Bill Williams told a discussion list that he successfully ran his truck on a device known as the Joe Cell. The power was far greater than the regular combustion engine -- and the energy was free.

The Joe Cell is said to draw on Orgone energy. The fairly simple device uses electrically charged water as the "gate" or medium through which the aetheric energy is drawn from the surroundings and transferred to the automobile engine.

Bill had posted images and rough descriptions, and was in process of disclosing in greater detail how he accomplished this, when he was confronted last week by two unidentified individuals who told him to cease all of his alternative energy work or there would be dire consequences.

On April 11, Bill gave the following account of what happened just a few days after announcing his success.

"I was on my way home Thursday last week [April 6, 2006] and was about 3 miles from the ferry project. I stopped to check the post connection point on the Cell. I was standing in front of my truck, and this late model 2005 or 2006 Ford Explorer pulled up and park diagonally in front of my truck.

"The driver got out of the rig and walked around in front of their rig and approached me. At about the same time, the passenger opened his door.

"The driver stated that they wanted me to stop working on all forms of alternative energy. He also stated that we know everything about me, my family, and all my projects past and present.

"At about that time the passenger reached and held up a file that was about 2 or so inches thick. He opened it up and showed me telephone transcripts, emails, messages from the groups that I had belonged to.

"They knew where my kids worked, the times they are at work; also my wife's working hours, my grandkids' school, etc. They knew everything.

"The driver said that if I did not stop working on this (he then opened up the left side of his jacket and showed his weapon that was holstered) that there would be other consequences.

"He also stated that he wanted me to post that I was no longer working in this field and to destroy all my work, i.e. Cells, Drawings, Lab Journals, everything!

"At that point he walked around and got into the rig. I shut the hood and got the hell out of there. They followed me for about 2 miles and then must have turned off somewhere."

After a few days of contemplation, Bill decided to abide by the demands of those who threatened him. He destroyed the cell and all data and documentation and disabled the website on which he had posted plans. Four days after that incident, Bill wrote the following message to the group:

"I thought I was strong but when illness to the family comes into play, I have failed. I am truly sorry. I will not be working in any form of alternative energy field anymore. [...]

"I destroyed my device tonight along with my written data and lab notes as per specked out."

Bill's Description of his Vehicle's Performance:

Before deciding to abide by the demands of those who threatened him, Bill gave the following report on April 6, 2006:

Report on the 70-mile test drive:

Well, all I can say is "who needs an Indy car when you can drive and old FORD" – WOW!!!! The first five-miles after leaving the home was wild. I had to be extremely careful on how I pressed the accelerator. I gingerly crept up to 45 MPH and that was about moving the pedal maybe a half-inch. It the throttle response was very crisp or touchy. With about a 1/8" of movement the next thing I new I was booking at close to 80 mph. If I lifted of ever so slightly on the throttle and it felt like I was putting the brakes on and the speed would drop down to 30 mph or so. "Very erratic". If I barely even touch or bumped the pedal it felt like I pushed the nitrous button. WOW !!!

As stated the first 5 miles were wild and things started to change. The engine started to buck or surge with very large rpm changes and literally threw me against my seat belt. It got so bad I just took my foot completely off the pedal and rode the brakes to stop the truck. The truck left skid marks on the pavement every time the engine surged in rpm. Well anyway I managed to get it stopped and shut it off with the ignition key, thank God.

I retarded the timing and turn the gasoline back on and crossed my fingers and hit the key and the engine took right off revving to may be 4000 rpm and then gradually decreased to 700 rpm. I took a deep breath and put it into drive and the truck responded close to normal again. [...]

Comments --- The current setup is not happening, I could not drive the truck in city driving, because I would be ramming the vehicles ahead of me and smoking the tires at every stop light. Still more work to do, and that is going to start this weekend. Converting the engine back to a 2-barrel carb (hell who needs a 4 barrel with this setup) so to gain more room to setup the blind fitting arrangement. Going to machine a flat Aluminium plate to set between the carb and the manifold. The adapter will be cut with a section on the front side of the carb projecting out and have a solid Aluminium stub. The stub will be where the Aluminium transfer tube will attach via a short section of hose. Will update the group after the adapter and conversion is in place and some basic testing has been accomplished. [...]

Regards, Bill

Others Picking up Where Bill Williams Left Off:

A few days ago, close associates who were incensed at what had be-fallen him, re-opened the Joe's Cell 2 Yahoogroups site, which Bill had been ordered to disable, and are now making sure as many interested people as possible have access to all relevant details.

The JoesCell2 group is for images. A discussion list has been formed at JoeCellFreeEnergyDevice, also a Yahoo!Group.

An index page for this project is being created at PESWiki.

Others Have Succeeded:

Bill is not the only one to have achieved this accomplishment of running his vehicle on a Joe Cell. John Carter, from Australia, estimates that there have been at least a dozen people who have achieved this -- running their vehicle on a Joe Cell.

Carter said he took a ride the other day in a Ford Econovan that Peter Stephens converted to run on a Joe Cell. He said the car "rocketed up the hill" it had so much power.

A good number of people now know how to do this, and the plans are being made available in diverse places.

It would appear that Pandora's box has been opened on this, never to be shut.

Controversial History:

The Joe Cell has a checkered past. Carter says that this is because a lot of people built it, but didn't know how to do it right, so there were a lot of failures in these replication attempts. There are unusual properties that cause people to stumble because they want to do things in a traditional manner.

The technology is not new, but stretches back to as early as 1834, with a more recent stint through New Zealand, before it took root in Australia, and then spread worldwide.

Author's Personal Experience with a Joe Cell:

I have personally witnessed a modified Joe Cell technology in action. It is an awesome sight to behold. I wrote up that account in February, 2003. It was not being used to run cars, but was being used to produce magnetically charged water for health benefits.

SOURCES:

John Carter email correspondence with Bill Williams.
Phone conversation with John Carter, April 13, 2006.

CONTACTS:

Bill Williams <bill177 {at} centurytel.net >

Peter <ingnventor {at} yahoo.com.au > (Has ran his car on a Joe Cell, and is glad to help anyone else do the same.)

John Carter <johngc {at} gmail.com > (Associate in Australia involved in the replication project.)

http://pesn.com/2006/04/14/9600259_Modified_Joe_Cell/ (April 14, 2006)

Modified Joe Cell Extracts Aetheric Energy to Charge Water

Device charges water electrically and magnetically. Sets off Geiger counter when the aetheric energy beings to flow.

by

Sterling D. Allan
Pure Energy Systems News

Originally written July 28, 2002, this article had been made available on a limited basis to a few individuals. It describes a modified Joe cell technology that was called AquaMEGA. Vernon Roth is presently continuing this technology.

At night, when the upper cabinet is open for viewing, you can see deep blue lights along with and as bright as white lights streaking in from the top and up from the bottom of the bottle of water. These can't be seen except when it is quite dark. It's like something out of science fiction. The above image from another context gives you an idea.

The device that creates this aetheric/magnetic water "came to" the inventor in a dream six years ago. It took him three days to build this device. It was actually initially intended to be a Tesla-like electrical generator that pulls energy from the aether.

As the inventor pulled together the various components of the device, he needed a resistor. Being the resourceful guy that he is, he pulled out a glass of water and used that for the resistor.

To his amazement, the water took on magnetic and electrical-like properties. He has used the device for that serendipitous purpose ever since.

Soon after getting the device built, it ceased running for quite some time. It took him another three months to figure out how the machine worked and to get it to run yet again.

Even so, the machine has a "personality" all its own. Sometimes, if someone comes into the premises who has highly negative emotions, the machine ceases to work. People who are "sensitive" to "energies" get an unusual sensation when the machine is operating.

The inventor knows now that he needs to shield the machine so as to protect people from some of the nuclear particles that are emitted while it is in operation. For the first two or three years, the inventor used to remark, "The machine is killing me, and the water is keeping me alive."

After the machine has been off for a while, when it is turned on, it takes about half a minute or so before the aetheric energies begin flowing. Until they flow, the machine generates ozone. Once

the aetheric energies begin flowing, the adjoining Geiger counter immediately shows a strong reading from the alpha particles being emitted. This transition takes place and is observable with no additional flipping of switches. I was amazed to see it.

People in the vicinity are now protected by a cabinet that has water between two layers of aluminum casing. To achieve this shielding cabinet, the inventor adapted an incubator from a University science department.

The machine is in the bottom portion of the cabinet, and the bottles of water to be charged are situated in the upper cabinet.

The first piece of equipment in the device is a motor. He used a 3 horse-power motor simply because that is what was available at the time. He thinks a 1/2 or 1/3-horse-power motor would do the trick.

That first motor turns another motor which he adapted, and which is one of the proprietary components of the device. It entails a reconfiguration of the magnets and the coils so as to be able to pull in the aetheric energy.

Next in line is a Joe Cell. For that, he took a motorcycle battery shell and adapted it (also proprietary) to the purpose specific to his device. From there, a larger cable is run a few times around a hollow coil. This "chokes" the aetheric energy so it doesn't burn up the device once the aetheric energies begin to flow. That cable then runs outside the lower chamber of the cabinet and then into the upper chamber where it is connected to a metallic rod with a conical end that can be raised and lowered into position to within 1/4 to 1/2 inche above the water that is to be "charged."

At night, when the upper cabinet is open for viewing, you can see deep blue lights along with and as bright as white lights streaking in from the top and up from the bottom of the bottle of water. These can't be seen except when it is quite dark. It's like something out of science fiction.

The inventor said that the aetheric energy is very slow compared to electricity that flows near the speed of light. Judging from timing how long it takes the aetheric energy to run through his set-up, he estimates that the aetheric energy he is tapping flows at around 2-3 feet per second.

At some point, he plans to return to the task of adapting this incoming energy for use in our power grid. It may be as simple as connecting it to a bank of capacitors and then running that through an inverter to convert that DC power into usable AC.

Eventually, through a smooth transition, he would like to see the AC power grid replaced by this more natural form of energy that is in harmony with life, not antithetical to it, as AC energy is. The power grid that crisscrosses the land actually blocks the natural aetheric flows of energy through the earth; and when it gets to a critical point, surpassing the earths ability to buffer, we will see some fantastic calamities result.

He recommends that all AC wiring be run through the floors (then up to the outlets) and not through the walls, as is usually the case in construction.

Speaking of electricity, the power company has paid him a visit twice, wondering why he is only using $20.00 of electricity per month, even though he has a shop in his garage with heavy equipment. They've checked his meter to make sure it is working right. It is.

There was one time when he was developing the device that something very unusual happened regarding triggering breaker switches. One day, when he turned the device on, the power went out. He went to check the fuse box in his home, but none of the breakers were tripped. He then noticed down the road that the breaker on the power pole was tripped. The power company had to come out and re-set it.

There's something going on there that we do not fully understand yet.

To hold the cord going into the machine is a sensation in itself. People call it the "fuzzy caterpillar."

Then there are the vortex storms he has over his house. He's lost nearly 1/3 of the shingles on his roof to micro-bursts from storms centered over his house, complete with lightning.

One time he had a bunch of boxes in a fenced area prepared to burn them. One of these storms came along, and the next morning the boxes were arranged in a circle around his house.

Another time, his friend was standing at the sink washing dishes, some 20 feet away from the machine. When the machine cycled through one of its phases, suddenly she was no longer standing in front of the sink, but was standing outside in a field. She saw people walking in the distance, and houses in the distance. Then the machine cycled through the next phase and instantly she was standing at the sink once again. My impression was that she was not moved through space but through time somehow.

These are amazing times in which we live.

Related Resource:

Vernon Roth is presently (2006) producing this water. His website is http://ancienttek.com . He may be reached at 719-783-0310.

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http://pesn.com/2006/04/16/9600261_Joe_Cell_instructions/
(April 16, 2006)

How to Run Your Car on a Joe Cell

Joe Cell Stretches the Believability Envelope with Working Replications

Explanation of the highly unusual technology and some of the astonishing claims surrounding it. This fuelless technology could make gasoline and diesel obsolete, while not requiring a change of the engine infrastructure now in existence.

by

Sterling D. Allan, with Peter Stevens
Pure Energy Systems News

If you lived on a desert island and were never exposed to modern technology, what might you think the first time you witnessed such marvels as cordless phone communications, ground and air travel, running water, and so many other fascinating advancements?

The claim to cars running on energy harnessed and directed by a Joe cell are equally astonishing to one well versed in the latest and greatest technologies of our day. To just hear about it is nearly too much to believe if you believe in the limitations that apply to a fuel-based energy paradigm.

Imagine a device about five inches in diameter by ten inches long, with a tube running from it to a bolt on your engine. Your engine is running, but your fuel line is disconnected. Not only does the motor run, but it has far more power than it did when running on gasoline or diesel. And somehow the car responds to the accelerator, even though the fuel line is disconnected. That and other seemingly cognitive attributes of a Joe cell have spurred people to call it a "living cell."

Weird; very weird -- and exciting.

This device, which makes fueling up obsolete, can be built for less than $100 in parts.

According to some proponents, electricity is what is being conveyed here. Others have experimented with the vapour. And others refer to it as a function of frequencies. Others invoke the living energy called Orgone, discovered and named by Wilhelm Reich in the mid-twentieth century.

The extreme shift of thinking required drives some people to the head-in-the-sand, preserve-my-comfortable-conformity statement: "If it sounds too good to be true, then it probably is."

Yet the number of people claiming to have achieved success with this phenomenon is growing. And the instructions of how to do so are becoming more clear, spawning yet more success.

Add to this the reports of individuals who are threatened with death or some harm coming to a loved one if they don't stop, such as happened to Bill Williams on April 11, 2006. In the past, that has worked by isolating the victim. In today's globally-warmed climate of widespread ecological concern, such suppression attempts now seem to fuel the interest and involvement of others to replicate the phenomenon and report their success.

Those pioneers, with a strong preponderance residing in Australia, who have worked for years on this technology, deserve a lot of credit for their inventiveness to try various things, as well as their tenacity to not give up. Perhaps these inventors from the land “down under” gravitate to this phenomenon because it seems so up-side-down from standard physics. Having "Joe" in their midst probably contributes as well, though the technology is actually at least a couple of centuryies old and arrived in Australia by way of Graham Coe from New Zealand.

Sir William Groves patented the device in 1830. In 1926, Walter Russell showed in his periodic tables the abnormal energies associated with all matter. Many of his drawings illustrated this energy at work.

A number of websites and discussion groups are springing up to help assure the continuance and expansion of the technology worldwide. We have created a project page at PESWiki for this purpose, which you can find by going to http://JoeCellHydra.com.

Guidelines for Successful Operation:

Peter Stevens, an Australian, has spent about fourteen years pursuing this technology. He installed a Joe cell on his Ford Econovan, with a modified V6 GMH engine. He helped Bill Williams (U.S.) get his truck running on a Joe Cell. Stevens is more than happy to help anyone figure out how to make their Joe cell work, and is glad to share what he knows with the world via the propagation made possible by the Internet.

The Joe Cell basically consists of several equally-spaced, concentric stainless steel cylinders, with water between them. Stevens recommends 3-1-6L, non-magnetic stainless steel. The number of cylinders and particular diameter and length of the cylinders do not seem to be crucial, though the ratios and proportionate spacing may be.

According to Stevens, the idea is to form a polarity on each cylinder, so that they are positive on the outside and negative on the inside at the lowest point. Some cells that leak or lose charge can be remedied and be maintained by a 1.5-volt battery, which is not drained in the process. It just serves as a potential (polarity) reference. Adding to the apparent quirkiness of the technology, Stevens has noted that this booster charge seems to be dependent on lunar cycles, and is not necessary during some moon phases. However, the comeback is that this is not quirkiness, but further evidence for the Electric Cosmos concept, in which all planets, moons, comets and stars are recognized as interacting electrically.

The connections of cylinders and caps and tubing generally need to be electrically insulated. However, standard insulating materials often don't work as they do with standard electrical processes but not with high-tension lead current. Stevens recommends natural rubber, without

the colourings. That and other additives seem to short out or bleed the frequencies. This is an additional suggestion of a living energy at work; it is primarily life forms that are sensitive to additives in this way. Ordinary electricity is a non-living force indifferent to such subtleties.

The central cylinder acts as the cathode tube. There is no positive lead coming from the cell. The cell does require charging to begin with for about 3-10 minutes. Stevens says that the central cathode is electrified up from the bottom insulated and the tube is in direct contact to the outside surface of the tube and not connected as some describe with a bolt wedged into the frequencies of energy from the cathode require negative to be on the outside. [Q / A]

He says a little machining needs to be done on the cathode tube, making a threaded bolt hub that is welded to the tube via an inert gas shield welder, or tig. The hub should also have a couple of holes in the base to allow water to flow within the tube. The hub can then be sealed at the base insulating material. Alternatively, washers can be made from a material like Teflon knife cutting boards. This ¾-inch (20 mm) clearing is also a spark gap to the body of the vehicle.

The jointing compound, marine-grade Sikaflex 291 should be used to make a water-tight seal between the cell and the mounting location. The hub is then able to support all the neutral tubes and allow for bolting to the car's engine compartment. Don't use silicon to seal. It breaks down and causes a mess that is difficult to clean up (requires a carbi cleaner).

The charge from the inside cell is conveyed from the Joe cell to the engine via a 1/2 inch (12mm) diameter aluminium tubing. The tubing is connected to the outside of the cell. It has positive potential and needs to be clear of any objects That tubing needs to stay clear by at least four inches from things such as the radiator hoses, fuel lines, electrical lines, and AC lines. The other end of that tube line can be attached to pretty much any blind or blank bolt on the engine. It needs to be insulated with a ½ to ¾-inch gap using plastic tubing so as to keep the positively-charged cell from shorting out.

If you can see the head of a bolt on top of the engine use it, so long as the aluminium line stays clear of the existing conducting lines in the engine compartment as just mentioned. There needs to be about a 3/4-inch gap between the line and the engine block for a "spark gap." The line can be connected to the bolt holding the air cleaner on the carburetor.

The line can be connected under the carburetor to the PCV if you wish to use vacuum pressure. In the process of learning about the Joe cell, Stevens said this is how they thought they needed to start the cell producing. It results in a vary erratic response generally, and is difficult to tune. It is critical to have the timing 68-73 degrees advanced with this configuration. [Q/A]

One of the videos in circulation shows an engine running as Joe is moving the high-tension lead from a spark plug along the engine with about a 1/2-inch gap. There is an arcing visible from the line to the engine block -- even into the radiator hose, air conditioning, fuel lines, and the Battery posts -- to show that the spark is a different frequency. This spark will jump into most things.

The fuel line to the car does not need to be disconnected, though it does need to be shut off. Stevens says that if the fuel line is not disconnected, then the frequency disrupts the efficient

running of the engine. He also recommends that an electric solenoid not be used in the fuel line, due to frequencies that it generates that conflict with the process.

Also, the timing on the engine needs to be advanced quite a bit. "On the crank about 80 degrees", says Stevens. "Some run at 70".

Then comes the final step of operation.

"To begin using the Cell it is best to arc off all the components --- negative to positive --- first at assembly then once together. Fill to the level of the tubes. Always put negative connection on the Joe Cell first. Then arc with positive 12 volts DC for three to ten minutes on the outside of the Joe cell. The engine should respond and start to accept the energy. Some gasket material absorbs the energy, but arcing the crank with a brush action to flash positive then negative will often overcome the barriers. Make sure you have a long screwdriver and hands clear, with an assistant rotating the motor on the start coil lead, disconnected, then all clear. Reconnect leads and happy driving."

Scaling:

Stevens says the Joe Cell could be made as small as a 35mm film container, which could run a 30cc brush cutter. He says a two-inch unit will run an ultra-light aircraft engine.

These instructions will continue to be expanded, clarified, upgraded, and illustrated at the JoeCellHydra.com site.

Google Search: Joe Cell (First 10 Pages)

Joe Energy Cell by Ken Adachi
This was my initial thinking when I first heard about Joe's cell, ... Alex Schiffer feels that the orgone from the Joe cell is transferred to the intake ...
educate-yourself.org/fe/fejoewatercell.shtml - 114k

Joe Cell Skeptic Encounters Donkey-in Mirror!
March 18, 2004. Thanks for passing along information from Click here: The Joe Energy Cell by Ken Adachi I certainly hope someone at one of the scientific ...
educate-yourself.org/lte/joecelldebunker18mar04.shtml - 92k

Analysis of the Joe Cell
The Joe Cell uses water as a storage medium, which, when charged above a certain ... The Joe Cell design implies a net movement of ether from positive to ...
www.twelvestar.com/Sourceworks/Joe%20Cell.html - 12k

Untitled
So, how does a Joe cell ? run ? a car? Or more correctly, how does it act as an ... So, if we use the Joe cell as a brake or damper or as a soak or as a ...
www.nutech2000.com/webtext/joecell/howdoesitwork.html - 37k

How does the JOE CELL WORK - Article by Alex Schiffer - Author of 'The Experimenter's Guide to the Joe Cell. Alex is a provate researcher and has a profound ...
www.nutech2000.com/webtext/linkpages/joecell.htm - 6k

JoeCell DownUnder
My own Experiments with the Joe Cell click Photo for full story. Who is Joe The 'Joe Cell', as it is dubbed was created sometime around 1993 by an ...
www.joecell.com.au/ - 26k

The Joe Cell Breakthrough - Alex Schiffer
So, how does a Joe cell "run" a car? Again I will stick my neck out and suggest ... All things in creation including our battery and the Joe cell obey this ...
energygrid.com/science/2002/as-joecell.html - 38k

Joe Cell Matrix
Group 2 Joe Cell Matrix With the square matrix of figure1 all line row, ... The Joe Cell matrix of figure 1 could have just as easily been worked out on ...
atl2.netfirms.com/engy/mutch/matrixlaw/joecell.htm - 48k

Stainless, working (Joe-cell)
TM Technologies, providing the finest tools and supplies for welding, sheet metal shaping and repair, aluminum gas, stainless steel, and cast iron welding, ...
www.tinmantech.com/html/faq__stainless__working__joe-c.html - 13k

Joe Cell Technology (Index by FreeEnergyNews.com)
Index of research and development and functioning devices that utilize Joe Cell technology.
freeenergynews.com/Directory/JoeCells/index.html - 51k

Directory:Joe Cell - PESWiki
A Joe Cell is similar to an electrolysis cell built with concentric ... Selling Joe Cell kits, manuals, books. Carry Experimenter's Guide to the Joe Cell ...
peswiki.com/index.php/Directory:Joe_Cells - 31k - Apr 13, 2006

Internet Archive: Details: joe cell, 3 stages.
joe cell, 3 stages. (2005). Alex Shiffer has produced a video, he called it 3 Stages ... The video runs for 23 minutes and is a (Must Have) for the Joe cell ...
www.archive.org/details/joe_cell_-_3_stages_introduction - 17k

Internet Archive: Details: Joe Cell - Two Enthusiasts 1993-1996 ...
Joe Cell - Two Enthusiasts 1993-1996 VideoCamera Recordings (2005). Joe_Cell_-_Two_Enthusiasts_1993-1996_VideoCameraRecordings Joecell Length 2h16min39sec ...

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Keely Net Mail List: Re: Electrostatic Power Generating System
I have persevered with Joe's cell and can state this: ... The printed report on Joe's cell claims that he converted 14 ordinary ...
www.keelynet.com/interact/arc_1_99-4_99/00000618.htm - 7k

Tips for a Joe Cell experimenter
Post Posted: Thu Mar 30, 2006 6:25 am Post subject: Tips for a Joe Cell ... Any joe cell experimenter will notice Bill leaves his cell on charge for 5 hours ...
www.mpgresearch.com/viewtopic.php?t=532 - 48k

IceStuff.com: The Joe cell MK 5 a possible new design from The ...
supplied to web author from an unknown source this could be the new version of the Joe cell.
icestuff.com/~energy21/joecellmod.htm - 13k

Stefano Hourmouzis Energy Research and Genuine Winner Roulette System
However I have now settled onto the Joe Cell, which is a multi-purpose energy ... Schauberger's and Reich's work is most directly related to the Joe Cell, ...
www.site-promotion.com/stefanohourmouzisnrg.htm - 57k

Roulette Computer, Stefano Hourmouzis verses Mark Howe
Its actually called a Joe Cell. Not only is it dangerous making vessels that produce hydrogen gas, it is old hat science and peoples lack of understanding ...
www.stefanohourmouzis.com/ - 61k

[PDF] The Joe Cell
File Format: PDF/Adobe Acrobat
In the light of what the Joe cell does, this is just as well. ... Returning to the Joe Cell, he uses cylindrical electrodes. This is interesting in that ...
www.web-space.tv/free-energy/PART63.pdf?PHPSESSID=312de3b25782184ccb480fc6a1c3bdf7

[DOC] The Joe Cell
File Format: Microsoft Word - View as HTML
There is much more information on the Joe cell that is available to the ... As all known effects of Orgone are seen in the functioning of a Joe cell, ...
www.republika.pl/kilerowiec/Free%20Energy%20alex%20schiffer%20The%20Joe%20Cell.doc

The Water Fuel Cell :: Index
Chemical and Catalysts Reactions to Make Hydrogen · Plasma Electrolysis · The Joe Cell. No new posts, The Joe Cell, 2, 14, Tue Apr 04, 2006 12:32 pm ...
stanleymeyer.com/phpBB2/index.php?c=15&sid=2245f841c38ab0995f0071daef1fd8a9 - 21k

Untitled Document
UK Engineer Urges Joe Cell 'Warning' or "better still remove it altogether" ... I would ask you to put a warning of explove risk on the Joe's Cell page, ...
www.stefanohourmouzis.com/orgone.htm - 14k

Spiritual Enlightenment - The Joe 'X' Water Cell
Joe's Cell, however, can produce hydrogen gas and could be used as a hydrogen fuel ... Joe's cell is capable of producing three different types of "gas", ...
enlightenment.en.funpic.de/modules.php?name=News&file=print&sid=59 - 44k - Cached - Similar pages

INE Devices Database - Device Names
... Alfred Hyde Device Hyde, William Jamison Energizer System Jamison, Lawrence Jefimenko Electrostatic Generators Jefimenko, Oleg Joe Cell Joe Keely Motor ...
www.padrak.com/ine/db/DEVICES.html - 19k

Water Fuel Cell :: View topic - Bill Williams Car is Running ...
Bill Williams Car is Running on the Joe Cell ! ... Quote:. Peter recommend this material and all Joe's cell construction states this is the material to use. ...
stanleymeyer.com/phpBB2/viewtopic.php?p=224&sid=e48cfba99a6ebd8064f8e1f7c208826e - 84k

ORGOMETER
Any excess geometry of direction of orgone field such as the suspected thoroid around Joe Cell or the orgone beam between the cell blind plug and the engine ...
www3.sympatico.ca/slavek.krepelka/ideas/orgom.htm - 7k

Peak Oil News and Message Boards Forums >> Post 26471 >>
Other similar references is the "joe cell" Be aware however that the 'joe cell' features "Orgone Energy" - a power so great that the 'energy' will assemble ...
www.peakoil.com/post26471.html - 87k

The Joe cell Device an explanation
The Joe cell is an alleged free-energy device said to be capable of running ... Nutech (source of book referred in 'Experimenters Guide to the Joe Cell) ...
energy21.freeservers.com/joecell.htm - 18k

Zero Point Energy - Home Page @ ringorgone.bravehost.com - A ...
Welcome to the Joe Cell Free Energy Device Website! ... This was my initial thinking when I first heard about Joe's cell, but Joe's Energy Cell taps into a ...
ringorgone.bravehost.com/index.html - 22k

joecellfreeenergydevice : Messages : 1-100 of 4817
joecellfreeenergydevice: Joe Cell Free Energy Device - Researching the Joe Cell ... About a year ago there were Joe Cell diagrams all over the net but now I ...

groups.yahoo.com/group/joecellfreeenergydevice/messages/1?viscount=100 - 107k - Apr 13, 2006

All PENT-UP, The Gravity of the Storm - and notes from the forming ...
Picture and Article about new Joe Cell / Browns Gas (Hydrogen Implosion) -simple modification to power a CAR - in Australia. (thanks Noah!) ...
www.soulinvitation.com/pentup/ - 63k

orgon
Experimenter's Guide to the Joe Cell, Alex Schiffer; How to Run Your Car on ...
www.galaksija.com/orgon.htm - 68k

Howard JOHNSON

Magnet Motor

***Science & Mechanics*: "Amazing Magnet-Powered Motor" (Spring 1980)**
H. Johnson & W. Harrison, Jr:" The Permanent Magnet Motor"
USP # 4,151,431: Permanent Magnet Motor
USP # 4,877,983: Magnetic Force Generating Method & Apparatus
USP # 5,402,021: Magnetic Propulsion System
Tom Bearden/Karl Bergmann Comments
Blueprints:
http://www.greaterthings.com/news/freeenergy/directory/howard_johnson_motor/blueprints/index.html

Lab Memorandum, CTEC, Inc (1996) (MS Word.doc, 1 MB)

Howard R. Johnson

Science & Mechanics **(Spring 1980) Cover Illustration**

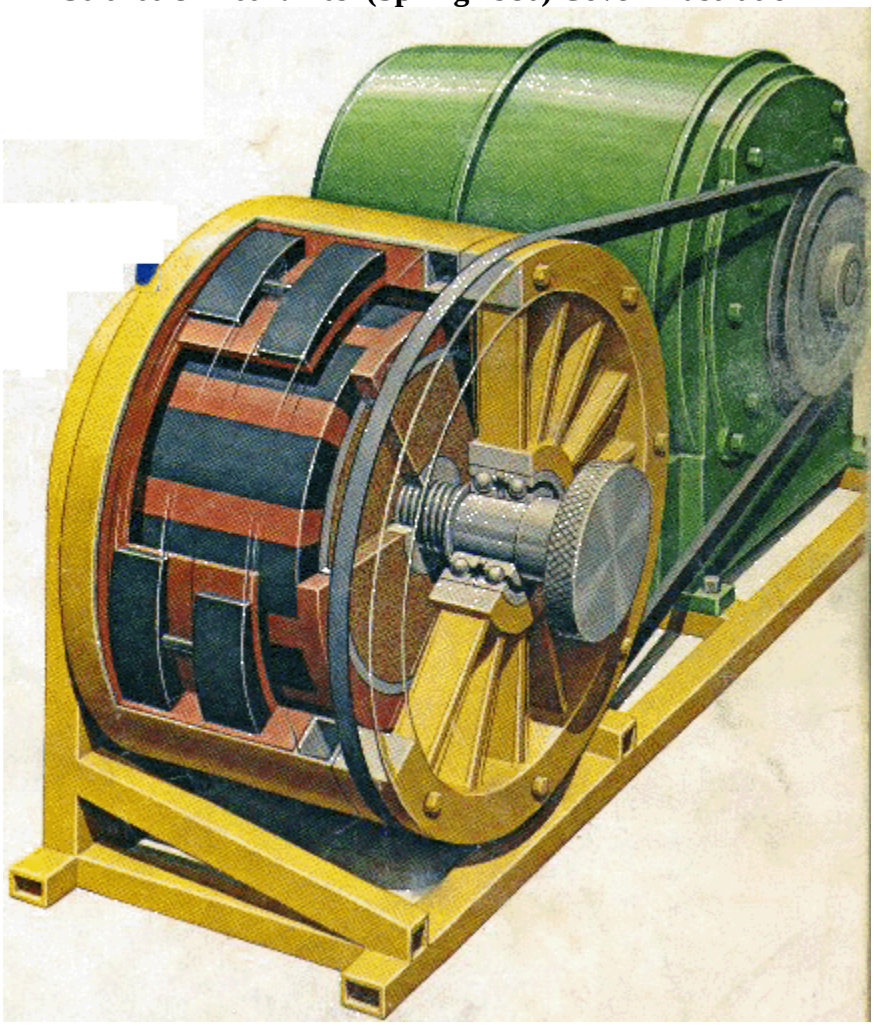
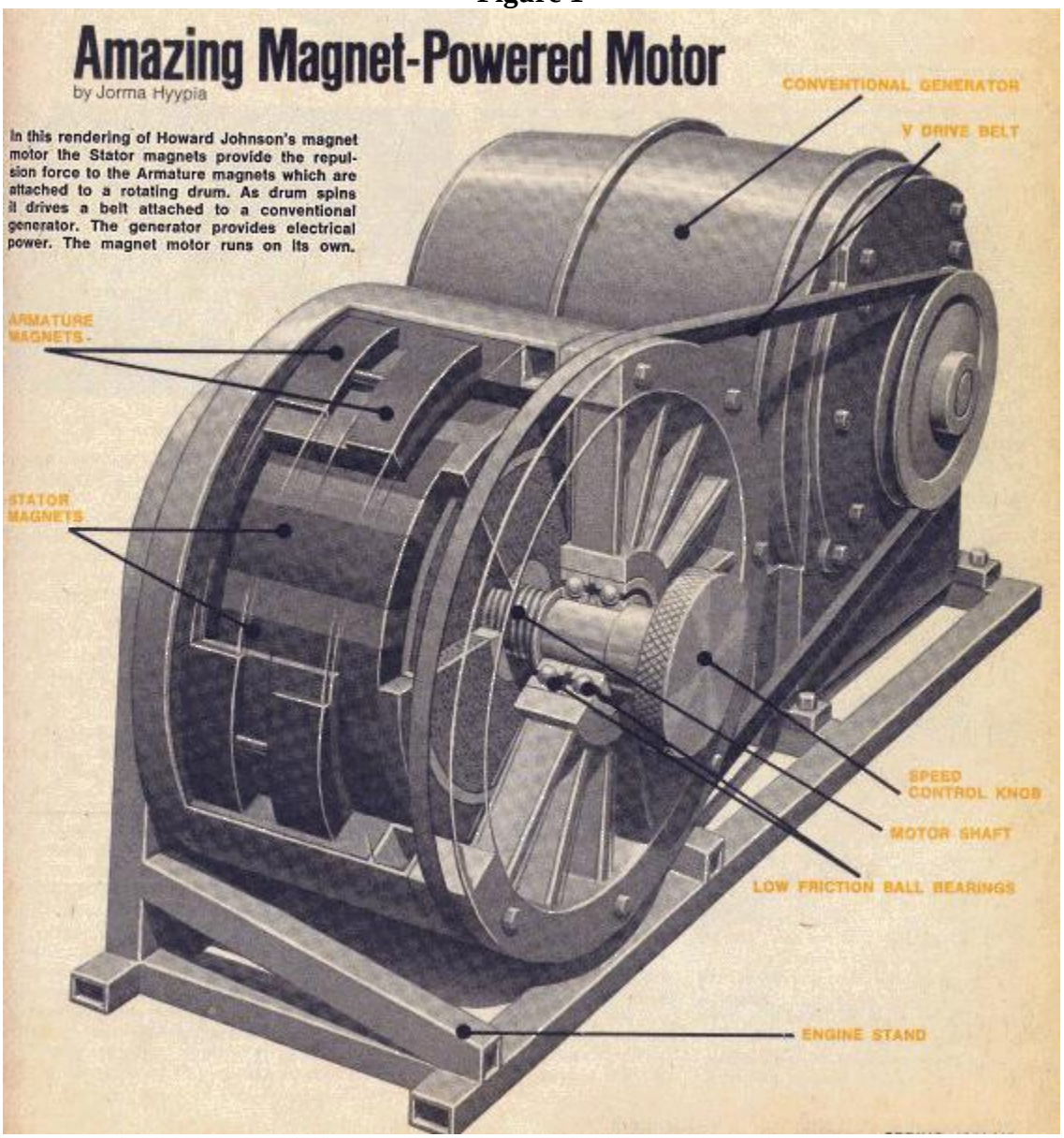


Figure 1



Science & Mechanics (Spring 1980)

"Amazing Magnet-Powered Motor"

by
Jorma Hyypia

"We don't grant patents on perpetual motion machines," said the examiners at the U.S. Patent Office. "It won't work because it violates the law of Conservation of Energy," said one physicist after another. But because, inventor Howard Johnson is not the sort of man to be intimidated by such seemingly authoritative pronouncements, he now owns U.S. Patent No. 4,151,431 which describes how it is possible to generate motive power, as in a motor, using only the energy

contained in the atoms of permanent magnets. That's right. Johnson has discovered how to build motors that run without an input of electricity or any other kind of external energy!

The monumental nature of the invention is obvious, especially in a world facing an alarming, escalating energy shortage. Yet inventor Johnson is not rushing to peddle his creation as the end-all solution to world- wide energy problems. He has more important work to do. First, there's the need to refine his laboratory prototypes into workable practical devices -in particular a 5,000-watt electric power generator already in the building. His second and perhaps more difficult major challenge: persuade a host of skeptics that his ideas are indeed practical.

Johnson, who has been coping with disbelievers for decades, can be very persuasive in a face-to-face encounter because he can not do more than merely theorize; he can demonstrate working models that unquestionably create motion using only permanent magnets. When this writer was urged by the editor of Science & Mechanics to make a thousand mile pilgrimage to Blacksburg, Virginia, to meet with the inventor, he went there as an "open-minded skeptic" and as a former research Scientist determined not to be fooled. Within two days, this former skeptic had become a believer. Here's why.

Doing the Unthinkable

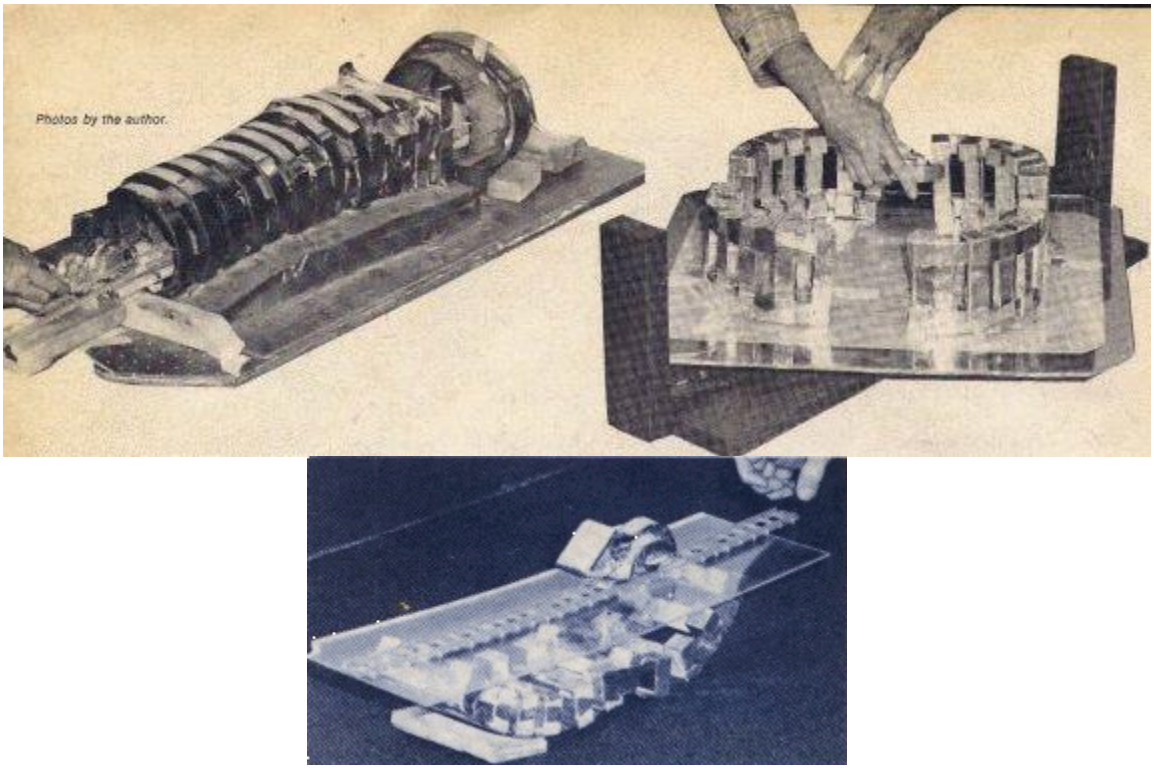
Howard Johnson refuses to view the "laws" of science as somehow sacred, so doing the unthinkable and succeeding is second nature to him. If a particular law gets in the way, he sees no harm in going around it for a while to see if there's something on the other side. Johnson explains the persistent opposition he experiences from the established scientific community this way: "Physics is a measurement science and physicists are especially determined to protect the ‘Law’ of Conservation of Energy. Thus the physicists become game wardens who tell us what laws' we can't violate. In this case they don't even know what the game is. But they are so scared that I and my associates are going to violate some of these laws, that they have to get to the pass to head us off!"

The critics say Johnson offers a "free lunch" solution to energy problems, and that there can be no such thing. Johnson demurs, reminding repeatedly that he has never suggested that his invention provides something for nothing. He also points gut that no one talks about a "free lunch" when discussing extraction of enormous amounts of atomic power by means of nuclear reactors and atom bombs. In his mind, it's much the same thing.

Johnson is the first to admit he doesn't actually know where the power be has tapped derives. But he postulates that the energy may be associated with spinning electrons, perhaps in the form of a "presently unnamed atomic particle." How do other physicists react to Johnson's suggestion that there may be an atomic particle so far overlooked by nuclear physicists? Says Johnson: "I guess it’s fair to say that most of them are revolted." On the other hand, a few converted scientists, including some who are associated with large and prestigious research laboratories, are intrigued enough to suggest that there should be a hunt for the answer, be it a "particle" or some other as yet unsuspected characteristic of atomic structure.

This article is prefaced with the foregoing brief summary of the ongoing controversy so that, in fairness to the inventor, we might all view his claims with open minds, even if it means temporary setting aside of cherished scientific concepts until more complete explanations are forthcoming. The main question to be answered here and now is this: Does Johnson permanent magnet motor work?

Before providing the answer, we need to face up to another question that undoubtedly nags in the minds of many readers: Is Johnson a bona fide researcher, or merely a "garage mechanic" mad inventor? As the following brief summary suggests, the inventor's credentials appear to be impeccable. Following seven years of college and university training, Johnson worked on atomic energy projects at Oak Ridge, did magnetics research for Burroughs company, and served as scientific consultant to Lukens Steel. He has participated in the development of medical electrical products, including injection devices. For the military he invented a ceramic muffler that makes a portable motor generator silent at 50 feet; this has been in production for the past 18 years. His contributions to the motor industry include: a hysteresis brake; non-locking brake materials for anti- skid application, new methods of curing brake linings; and a method of dissolving asbestos fibers. He has also worked on silencers for small motors, a super charger, and has perfected a 92-pole no-brush generator to go in the wheel of Lincoln automobiles as a skid control; that last item reduced the cost to one-eighth of the cost of an earlier design by utilizing metal-filled plastics for the armature and field. In all, Johnson is connected with more than 30 patents in the fields of chemistry and physics.



Figures 2, 3 & 4: Magnet Motor Models ~ Pictured here are three of the inventor's early models. Top left is a linear motor which propels a magnetic vehicle at high speeds through a series of rings. Top right is rotary motor upon which the prototype will be built. The 8-

ounce manget, hand held to the large ring weighing 40 pounds, provides enough force to spin the entire assembly. In the third assembly above, the vehicle is propelled, in either direction, by the force of the large magnets arranged below tracks.

Sticky Tape Scientist

Despite his impressive credentials, this amiable and unpretentious inventor likes to characterize himself as a "Sticky tape" scientist. He sees no virtue in wasting time building fancy, elaborate equipment when more simple assemblies serve as well to test new ideas. The prototype devices shown in the photographs in this article were assembled with sticky tape and aluminum foil, the later material being used mainly to keep individual, permanent magnets packaged together so that they do not fly apart.

Perhaps the best way to describe what these three gadgets do is by reciting this writer's personal experiences during the interview demonstration. That way I will not merely be telling what the inventor says they do, but I will reveal what happened when I tried the experiments myself. When we start talking about how and why the things work as they do, well have to rely on the inventor’s explanations.

The first item consists of more than a dozen foil-wrapped magnets assembled to form a broad arc. Each magnet is extended upward slightly at each end to form a low U-shape, the better to concentrate magnetic fields where they are needed. The overall curvature of the mass of magnets apparently has no particular significance except to show that the distance between these stator magnets and the moving vehicle is not critical. A transparent plastic sheet atop this magnet assembly supports a length of plastic model railroad track. The vehicle, basically a model railroad flatcar, supports a foil-wrapped pair of curved magnets, plus some sort of weight, in some cases merely a rock. The weight is needed to keep the vehicle down on the track, against the powerful magnetic forces that would otherwise push it askew. That 'is all there is to the construction of this representation of a "linear motor."

I was prepared to develop eye strain in an effort to detect some sort of motion in the vehicle. I need not have been concerned. The moment the inventor let go of the vehicle be carefully placed at one end of the track, it accelerated and literally zipped from one end to the other and flew onto the floor! Wow!

I tried the experiment myself, and could feel the powerful magnetic forces at work as I placed the vehicle on the track. I gently eased the vehicle to the critical starting point, taking great care not to exert any kind of forward push, even inadvertently. I let go, Zip! It was on the floor again, at the other end of the track. Knowing that I would be asked if the track might have had a slant, I reversed the vehicle and started it from the opposite end of the track. It worked just as effectively in the reverse direction. In fact, the vehicle can even navigate a respectable upgrade. In light of these tests, and considering the remarkable speed of the vehicle, you can discount any notion that this was a simple "coasting" effect.

Incidentally, the photograph shows the vehicle about half ways along the track. It was "frozen" there by the electronic flash used to make the picture; there is no way of "posing" the vehicle in that position short of tying it down.

The second device has the U-shaped magnets standing on end in a rough circular arrangement oddly reminiscent of England's Stonehenge. This assembly is mounted on a transparent plastic sheet supported on a plywood panel pivoted, underneath, on a free turning wheel obtained from a skateboard. As instructed, I eased the 8-ounce focusing magnet into the ring of larger magnets, keeping it at least four inches away from the ring. The 40 pound magnet assembly immediately began to turn and accelerated to a very respectable rotating speed which it maintained for as long as the focusing magnet was held in the magnetic field. When the focusing magnet was reversed, the large assembly turned in the opposite direction.

Since this assembly is clearly a crude sort of motor, there's no doubt that it is indeed possible to construct a motor powered solely by permanent magnets.

The third assembly, which looks like the bones of some prehistoric sea creature, consists of a tunnel constructed of rubber magnet material that can be easily bent to form rings. This was one of the demonstration models Johnson took to the U.S. Patent Office during his appeal proceedings. Normally the patent examiners spend only a few minutes with each patent applicant, but played with Johnson’s devices for the better part of an hour. As the inventor was leaving, he overheard one sideline observer remark: "How would you like to follow that act?!"

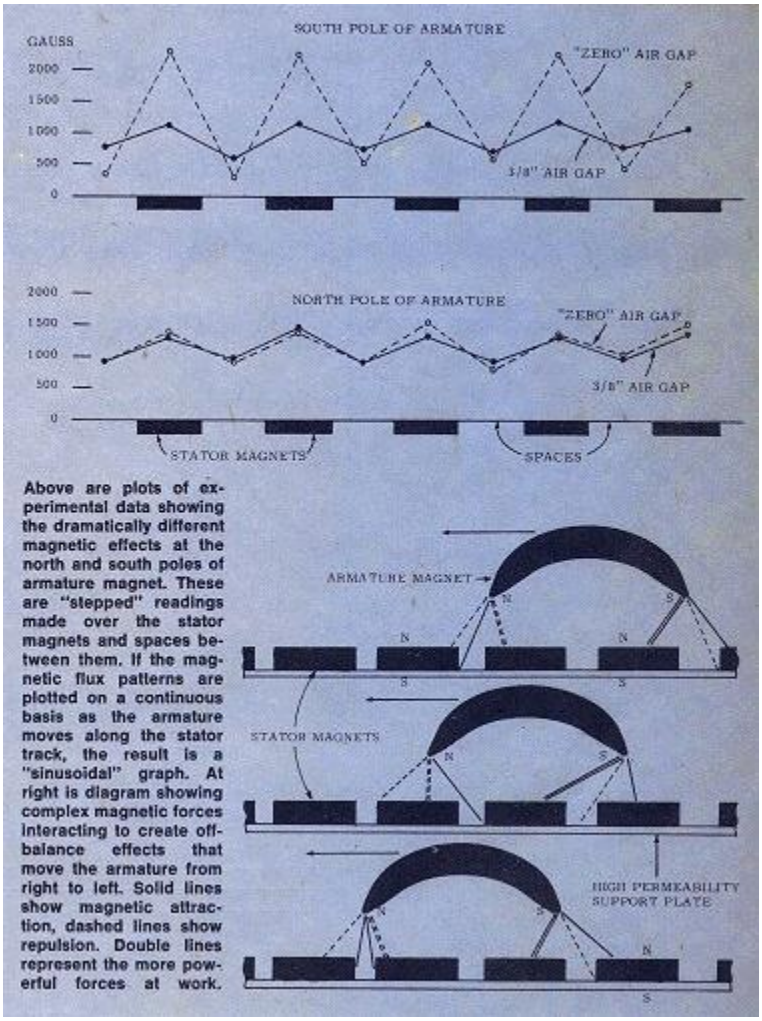
It took Johnson about six years of legal hassling to finally obtain his patent, and he has been congratulated for his ultimate victory over patent office bureaucracy as well as for his inventiveness. One sign that he left the patent office more than a little shaken by the experience was the inclusion of diagrammatic material in the printed patent that does not belong there. So if you look up the patent, pay no attention to the "ferrite" graph on the first page; it belongs in some other patent!

The tunnel device of course worked very well in the inventor's office during my visit although Johnson observed that the rubber magnets are perhaps a thousand times weaker than the cobalt samarium magnets used the other assemblies. There's just one big problem with the more powerful magnets: they cost too much. According to the inventor, the magnets used to construct the Stonehenge rotating model are collectively worth more than one thousand dollars. But there's no need to depend solely on mass-production economies to bring the cost down to competitive levels. Johnson and U.S. Magnets and Alloy Co. are in the process of developing alternative, relatively low cost magnetic materials that perform very well.

How do they work?

The drawing that shows a curved "arcuate" armature magnet in three successive positions over a line of fixed stator magnets provides at least highly simplified insights into the theory of permanent magnet motive power generation. Johnson says curved magnets with sharp leading and trailing edges are important because they focus and concentrate the magnetic energy much

more effectively than do blunt-end magnets. These arcuate magnets are made slightly longer than the lengths of two stator magnets plus the intervening space, in Johnson's setups about 3-1/8 inches long.



Above are plots of experimental data showing the dramatically different magnetic effects at the north and south poles of armature magnet. These are "stepped" readings made over the stator magnets and spaces between them. If the magnetic flux patterns are plotted on a continuous basis as the armature moves along the stator track, the result is a "sinusoidal" graph. At right is diagram showing complex magnetic forces interacting to create off-balance effects that move the armature from right to left. Solid lines show magnetic attraction, dashed lines show repulsion. Double lines represent the more powerful forces at work.

Note that the stator magnets all have their North faces upward, and that they are resting on a high magnetic permeability support plate that helps concentrate the force fields. The best gap between the end poles of the armature magnet and the stator magnets appears to be about 3/8 inch.

As the armature north pole passes over a magnet, it is repelled by the stator north pole; and there's an attraction when the north pole is passing over a space between the stator magnets. The exact opposite is of course true with respect to the armature South pole. It is attracted when passing over a stator magnet, repelled when passing over a space.

The various magnetic forces that come into play are extremely complex, but the drawing shows some of the fundamental relationships. Solid lines represent attraction forces, dashed lines represent repulsion forces, and double lines in each case indicate the more dominant forces.

As the top drawing indicates, the leading (N) pole of the armature is repelled by the north poles of the two adjacent magnets. But, at the indicated position of the armature magnet, these two repulsive forces .(which obviously work against each other), are not identical; the stronger of the two forces (double dashed line) overpowers the other force and tends to move the armature to the left. This left movement is enhanced by the attraction force between the armature north pole and the stator south pole at the bottom of the space between the stator magnets.

But that's not all! Let's see what is happening simultaneously at the other end (S) of the armature magnet. The length of this magnet (about 3-1/8 inches) is chosen, in relation to the pairs of stator in magnets plus the space between them, so that once again the attraction/repulsion forces work to move the armature magnet to the left. In this case the armature pole (S) is attracted by the north surfaces of the adjacent stator magnets but, because of the critical armature dimensioning, more strongly by the magnet (double solid line) that tends to "pull" the armature to the left. It overpowers the lesser "drag" effect of the stator magnet to the right. Here also there is the added advantage of, in this case, repulsion force between the south pole of the armature and the south pole in the space between the stator magnets.

The importance of correct dimensioning of the armature magnet cannot be over-emphasized. If it is either too long or too short, it could achieve an undesirable equilibrium condition that would stall movement. The objective is to optimize all force conditions to develop the greatest possible off-balance condition, but always' in the same direction as the armature magnet moves along the row of stator magnets. However, if the armature is rotated 180 degrees and started at the opposite end of the track, it would behave in exactly the same manner except that it would, in this example, move from left to right. Also note that once the armature is in motion, it has momentum that helps carry it into the sphere of influence of the next pair of magnets where it gets another push and pull, and additional momentum.

Complex Forces

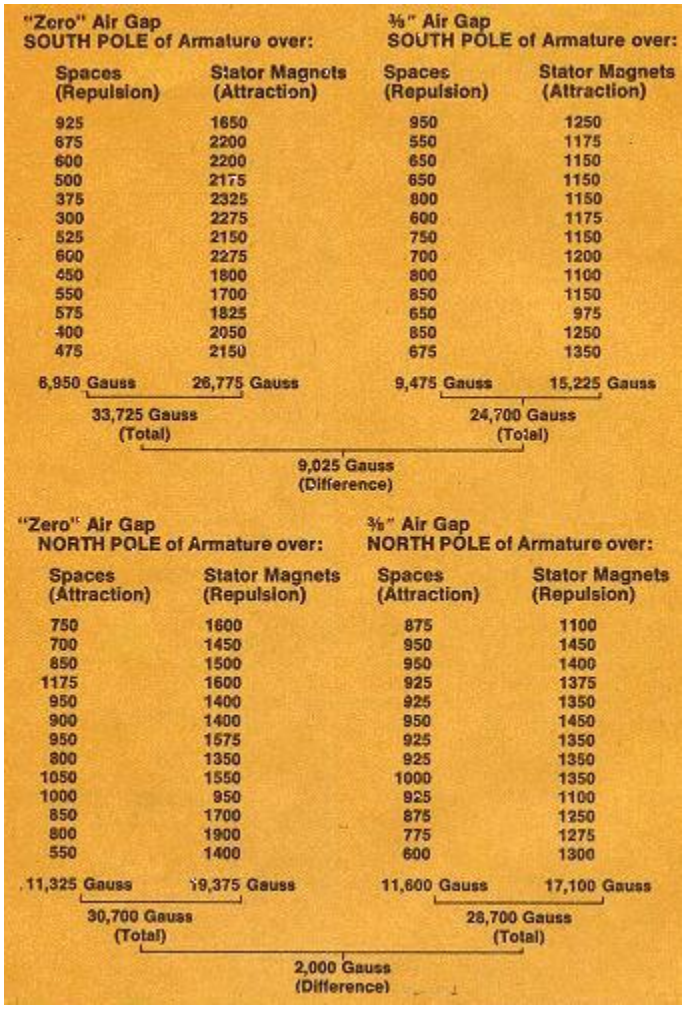
Some very complex magnetic forces are obviously at play in this deceptively simple magnetic system, and at this time it is impossible to develop a mathematical model of what actually occurs. However, computer analysis of the system, conducted by Professor William Harrison and his associates at Virginia Polytechnic Institute (Blacksburg, VA), provide vital feedback information that greatly helps in the effort to optimize these complex forces to achieve the most efficient possible operating design.

As Professor Harrison points out, in addition to the obvious interaction between the two poles of the armature magnet and the stator magnets, many other interactions are in play. The stator magnets affect each other and the support plate. Magnet distances and their strengths vary despite best efforts of manufacturers to exercise quality controls. In the assembly of the working model, there are inevitable differences between horizontal and vertical air spaces. All these interrelated factors must be optimized, which is why computer analysis in this refinement stage is vital. It's a kind of information feedback system. As changes are made in the physical design, fast dynamic measurements are made to see whether the expected results have actually been achieved. The 'new computer data is then used to develop new changes in the design of the experimental model. And so on, and on.

That very different magnetic conditions exist at the two ends of the armature is shown by the actual experimental data displayed in the table and associated graph. To obtain this information, the researchers first passed the probe of an instrument used to measure magnetic field strengths over the stator magnets and the intervening spaces. We shall call this the "Zero" level although there is a very tiny gap between the probe and the tops of the stator magnets. These measurements in effect indicate what each pole of the armature magnet "sees" below as it passes over. the stator magnets.

Next the probe is moved to a position just beneath one of the armature poles, at the top of the 3/8-inch armature-to-stator air gap. Another set of magnetic flux measurements is made. The procedure is repeated with the probe positioned just beneath the other armature pole.

Now "Instinct" might suggest, and correctly so, that the flux measurements at the top and bottom of the air gap will differ. But if "instinct" also suggests that these differences are pretty much the same at the two armature pole positions, you would be very much in error!



First study the two tables that show actual flux density measurements. Note that in this particular experiment the total magnetic flux amounted to 30,700 Gauss (the unit of magnetic strength)

when the probe was held at the "Zero" level under the north pole of the magnet, and a total of 28,700 Gauss when the probe was moved to the top of the 3/8-inch air gap. The difference between these total 'measurements is 2,000 Gauss.

Similar readings made at the air gap between the south pole of the armature and the stator magnets indicates a total flux at "Zero" level of 33,725 Gauss, and 24,700 Gauss at the top of the air gap. This time the difference is a much larger 9,025 Gauss, or four and one half times greater than for the north pole! Clearly, the magnetic force conditions are far from identical at the two ends of the armature magnet.

The middle five pairs of figures from each table hive been plotted in graphic form to make these differences more obvious. In the top "South Pole" graph the dashed line connects, the "Zero" level readings made over the stator magnets and over the intervening air spaces. Points along the solid line indicate comparable readings made with the probe just beneath the armature south pole. It is easy to see that there is an average 43% reduction of the attraction between the armature and stator magnets created by the air gap. Equally true, but perhaps not so obvious, is the fact that there is an average 36% increase of repulsion when the south pole of the armature passes over the spaces between the stator magnets. The percentage increase only seems smaller because it applies to a much smaller "Zero" level value.

The second graph shows that the changes are much less dramatic at the north pole of the armature. In this case there's an average 11.7% decrease of attraction over the spaces, and a 2.4% increase, of repulsion when the armature north pole passes over the stator magnets.

As you study the data, be sure to note that the columns are labeled differently. In the case of the north pole data, the stator magnet areas repulse the armature north pole while the spaces between the stator magnets attract. The conditions are exactly the opposite for the south pole of the armature magnet. When the south pole passes over a magnet, there is strong attraction; when it passes over a space, there is repulsion.

The Ultimate Motor

A motor based on Johnson's findings would be of extremely simple design compared to conventional motors. As shown in the diagrams developed from Johnson’s patent literature, the stator/base unit would contain a ring of spaced magnets backed by a high magnetic permeability sleeve. Three arcuate armature magnets would be mounted in the armature which has a belt groove for power transmission. The armature is supported on ball bearings on a shaft that either screws or slides into the stator unit. Speed control and start/stop action would be achieved by the simple means of moving the armature toward and away from the stator section.

There is a noticeable pulsing action in the simple prototype units that may be undesirable in a practical motor. The movement can be smoothed, the inventor believes, by simply using two or more staggered armature magnets as shown in another drawing.

What’s Ahead?

For inventor Howard Johnson and his permanent magnet power source there's bound to be plenty of controversy, certainly, but also progress. A 5000 watt electric generator powered by a permanent magnet motor is already on the way, and Johnson has firm licensing agreements with at least four companies at this writing.

Will we see permanent magnet motors in automobiles in the near future? Johnson wants nothing to do with Detroit at this time because, as he puts it: "It’s too emotional - we’d get smashed into the earth!" The inventor is equally reluctant to make predictions about other applications as well, mainly because he just wants time to perfect his ideas and, hopefully, get the scientific establishment to at least consider his unorthodox ideas with a more open mind.

For example, Johnson argues that the magnetic forces in a permanent magnet represent superconductance that is akin to phenomena normally associated only with extremely cold superconducting systems. He argues that a magnet is a room temperature superconducting system because the electron flow does not cease, and because this electron flow can be made to do work. And for those who pooh- pooh the idea that permanent magnets do work, Johnson has an answer: "You come along with a magnet and pick up a piece of iron, then some physicist says you didn't do any work because you used that magnet. But you moved a mass through a distance. Right? That's work that requires energy. Or you can hold one magnet in the air indefinitely by positioning it over another magnet with like poles facing. The physicist will argue that because it involves magnetic repulsion, no work is done. Yet if you support the same object with air, they will agree in a minute that work is done!"

There's no doubt in Johnson's mind that he has succeeded in extracting usable energy from the atoms of permanent magnets. But does that imply that the electron spins and associated phenomena that he thinks provide this power will eventually be used up? Johnson makes no pretense of knowing the answer: I didn't start the electron spins, and I don't know any way to stop them - do you? They may eventually stop, but that is not my problem."

Johnson still has many practical problems to solve to perfect his invention. But his greater challenge may be to win general acceptance of his ideas by an obviously nervous scientific community in which many physicists remain compulsive about defending the law of Conservation of Energy without ever wondering whether that "law" really needs defending.

The dilemma facing Johnson is not really his dilemma but rather that of other scientists who have observed his prototypes. The devices obviously do work. But the textbooks say it shouldn’t work. And all that Johnson is really saying to the scientific community is this: here is a phenomenon which seems to contradict some of our traditional beliefs. For all our sakes let’s not dismiss it outright but take the time to understand the complex forces at work here.

The Permanent Magnet Motor

by
Howard R. Johnson
&
William P. Harrison, Jr.

(Engineering Fundamentals Division, Virginia Polytechnic Institute and State University, Blacksburg, VA)

Presented at the UNITAR (UN Institute for Training & Research) Conference on Long-Term Energy Resource, Montreal, Canada, November 26-December 7, 1979.

I. Introductory remarks (by Mr. Johnson)

Today when energy is so expensive, it is not hard to drum up interst for most any avenue that offers a breath of hope or a way of escape, but this was not necessarily so in 1942. We were somewhat satisfied and convinced that we had the main sources of energy in view. So it took a pure act of faith to try to develop a new un-named source.

It took faith to spend time on it. It took faith to spend money on it. And it took faith to consider facing the opposition later when I made my work known and faced all the *status quo* people.

So, in 1942 using the Bohr model of the atom, and knowing that unpaired electron spins created a permanent magnet dipole, I kept wondering why we couldn't use these fields to drive something. I was sure that the magnetic effect of the spins was similar enough to the field of a current in a wire to do the same thing. I had no knowledge of electron spins stopping and knew no method that I could exert to stop them, so I decided to try to work out a method to use them.

At the same time there were no good hard magnetic materials that I knew of, materials that could be opposed with strong magnetic fields and not be demagnetized enough to damage them. Not only that, they would not give the thrust that I desired.

Having a chemical background, I thought it would be nice to use the best magnetic materials I could find in combination with an interstitial material that was highly diamagnetic to force the electron spin to stay in place.

The U.S. Navy later made such a compound using bismuth and good magnetic materials, but the internal coercive forces were so great that this strong magnet would fall apart if not encased in glass. It was also expensive.

So I kept checking magnetic materials while I worked on designs that I thought should be implemented. It was a quiet, sometimes lonely job over the years, for I didn't share my plans with my associates. My self-imposed security would not permit it, and I knew of few people who would be interested anyway.

In the fifties, as ceramic magnets became better and harder, and long-field metal magnets appeared on the scene, I began to freeze some designs and to have magnets custom made to fit them.

It was about this time that I mentioned the fact that just as I believed electron spins made permanent magnets, I also believed that they were responsible for the 60° angles in the structure of snowflakes giving the six-spoked wheel, the six-sided spokes, etc. The dean of the school where I was teaching said, "Maybe so" and ask me if I knew that snowflakes were mentioned in the Bible as being important. I told him, "No, I didn't know that," but I looked it up. It said: "Hast thou entered into the treasures of the snow? Or hast thou seen the treasures of the hail? Which I have reserved against the time of trouble, against the day of battle and war."

My comment was, "Well, maybe this is more important than I thought." So I went ahead and worked on it another ten years.

I went to the Library of Congress and looked up snowflakes. I found a wonderful book there by Dr. Bentley of New Hampshire. He has spend many years making these studies, and he had learned a lot, as well as turning out one of the world's most beautiful books. He had found that snowflakes have gas pockets oriented on 60° angles and that the gas has a higher percentage of oxygen than air. That's one reason why snow water rusts so well. This higher concentration of oxygen also interested me because oxygen is more attracted to a magnetic field than other gases.

Finally, using the best ceramic magnets I could find and the best metal magnets, I worked out a scheme for a linear motor. The stator would be laid out as if it were unwound from around a motor. The parts of the armature would ride just above the stator and have the same beveled angular orientations I have just mentioned.

Dies were made for the curved armature magnets, and an order was placed for these shapes, despite the objections of magnet manufacturers who said it was a bad design. They didn't know what it was for, but they were sure it was a bad design. They wanted to make horseshoe magnets. They even begged me to content myself with half an order. I did not agree --- and once again you have that little matter of faith; faith to try to implement a new theory; faith to spend your own limited funds when you have a a family and other financial responsibilities staring you in the face; faith to buck the recognized authorities and manufacturers in the field; faith to believe that your work is good and that some day, despite all the hazards, you will apply for and receive patent rights in your own country and perhaps throughout the rest of the world; and finally, faith that you can resist being smashed into dust by industrial giants and/or being robbed by others who know only how to steal.

Believe it or not, my first motor assembly showed about two pounds of thrust. The little toy car on which I fastened the armature magnets for support ran in both directions over the stator, showing that the focusing and timing of the interactions was not too bad.

This was the first light at the end of a rather dark tunnel I had been traveling for many years. I breathed a real sign of relief as my young son played with this "new toy," and was able to operate it as easily as I could.

After much testing of linear and circular designs, and looking for an attorney for years suited to securing a patent on the new theoretical work, I was led to Dunkan Beaman of Beaman & Beamon in Jackson, Michigan. It took some time to prepare the patent. The attorney built some models himself to check certain parameters. Finally, we entered the case in the patent office expecting a lot of opposition. We were correct. We got it. But again, faith saved the day as we battled for many years to gain a rather complete victory.

Now the work requires different kinds of faith: faith in those who have taken cut licenses and who will license; faith to continue the research to replace scarce materials in the magnets; and faith that this work will continue to progress and that it will eventually fulfill its goal.

For a number of reasons, the permanent magnet motor has not received much consideration. In fact, nothing too radical has been done since Faraday took some very crude materials and showed the world that it was possible to make a motor. This work of his largely influenced the thinking of Clerk Maxwell and others who followed.

Today, the two greatest obstacles to using a permanent magnet motor are, first, the belief that it violates the conservation of energy law; and, secondly, that the magnetic fields of attraction and repulsion decrease according to the inverse square law then the air gap is increased.

In fact, both contentions are quite wrong because they are based on wrong considerations.

The permanent magnet is a long time energy source. This has been shown for many years in the rating of magnets as high or low energy sources for many applications over long usage.

A loudspeaker composed entirely of electromagnets would be unreal in size and energy consumption. Yet, despite examples of this type, many hesitate to apply the same principles to motors and extend them even further by using permanent magnets for both the stator and armature.

The elements of all electric and permanent magnet motors are similar. A field imbalance must be created, the fields must be focused and timed, and magnetic leakage must be controlled.

In the wound motor, brushes and contact rings give the timing, the size and shape of the wound fields and poles gives the focusing, and the motor case and kind of iron used help to limit the leakage.

In our permanent magnet motors the timing is built into the motors by the size, shape, and spacing of the magnets in the stator and armature. The focusing is controlled by the shape of the magnets, pole length, and the width of the air gap. This air gap, through which magnets oppose and attract each other, is a rare phenomenon. Usually when a magnetic air gap is increased, the field decreases inversely as the square.

When the air gap of the permanent magnet motor is increased, a curious but definite change takes place. There is a large decrease in the reading at south pole of the armature and an increase in the reading at the north pole. Thus, a Hall-effect sensing probe will give a higher gauss

reading at the north pole and a decreasing count at the south pole. This helps explain why the thrust is better with a larger air gap than a smaller one. The attracting field is minimized and will not produce a locking force, while the repulsion of the crescent magnet is great enough to generate a thrust vector component that will drive the armature.

As I tried to explain in the patent, I believe that the permanent magnet is the first room temperature super conductor. In fact, I believe that super conductors are simply large wound magnets. The current in a super conductor is not initiated by a strong emf, such as a battery, but is instead actually induced into existence by a magnetic field. Then, in order to determine how much current may be flowing in the super conductor coil, we measure its magnetic field. This appears to be something like going out the door and coming back in the window.

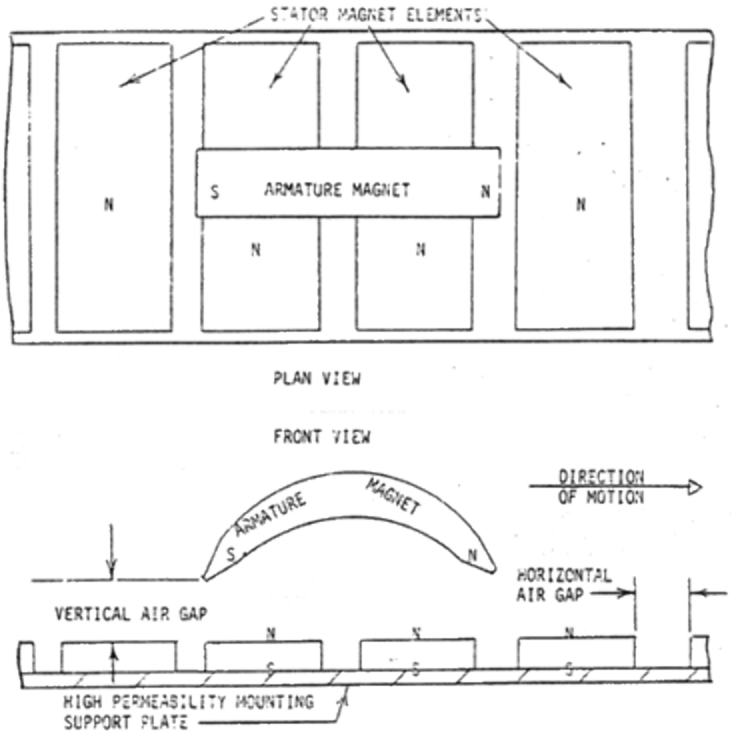
Another rather unique feature of super conductors is the fact that their magnetic lines of force experience a change in direction. No longer do these lines flow at right angles to the conductor, but they now exist parallel to the conductor. Theoretically, the heavy conductor currents exist in the fine filaments of niobium within each small wire of niobium tin from which such super conductors are made. Isn't it interesting that the finer the wire the less the resistance until eventually there is no resistance at all?

II. Theoretical Analysis (presented by William P. Harrison, Jr.)

1. Introduction

Despite the fact that the linear version of the permanent magnet motor (Johnson, 1979) may appear conceptually simple (see Fig. 1), the complex interactions of the fields alone place it in a class with other quite sophisticated motive systems.

Figure 1: Partial Front and Plan Views of a Linear Model of the Howard Johnson Permanent Magnet Motor



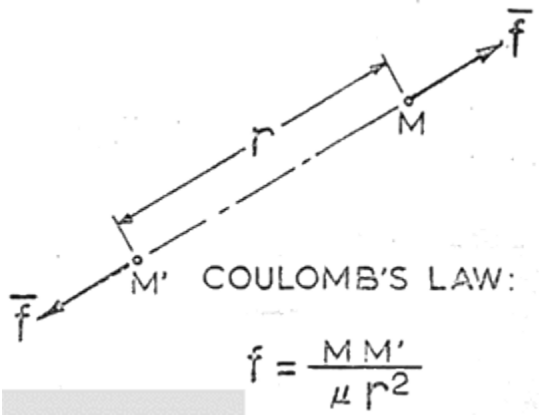
Many parameters play an important part in making possible the successful design of a permanent magnet motor. A number of these variables relate directly to the geometry of the system and its components. Mathematical models for both the linear and circular versions of Mr. Johnson's motors are presently under development, and include such controllable parameters as stator-to-armature air gap, stator element air gap spacing, armature pole length, stator magnet dimensions, magnet material variations, magnetic permeability and geometry of backing metals, and multiple armature couplings, to mention only a few. However, much of the early work involved quit simple mathematical investigations, and even at this level some remarkable revelations resulted. Also, as often is true with simple models, considerable insight into the mechanisms that might prove predominant was gained. Therefore, it is our intention to share with you some of those early analytical investigations and findings.

Even though Coulomb's Law, embodying the inverse square relationship as it does, may yet prove suspect, it nevertheless provides an exceedingly simple yet viable form upon which to base an elementary model of the linear version of the permanent magnet motor. Describing the interaction between two magnetic monopoles, Coulomb's Law in vector form is recalled as

(1) $$\overline{f} = \frac{\overline{MM'}}{ur^2}$$

where M and M' are the pole strengths (positive if north, negative if south), *u* [mu] is the permeability of the medium in which the poles are located, *r* is the straight-line separation distance between the two poles, and $\underline{f}$ [*f* with line over top] is the vector of force (see Fig. 2) acting at each pole (positive in magnitude for repulsion and negative for attraction).

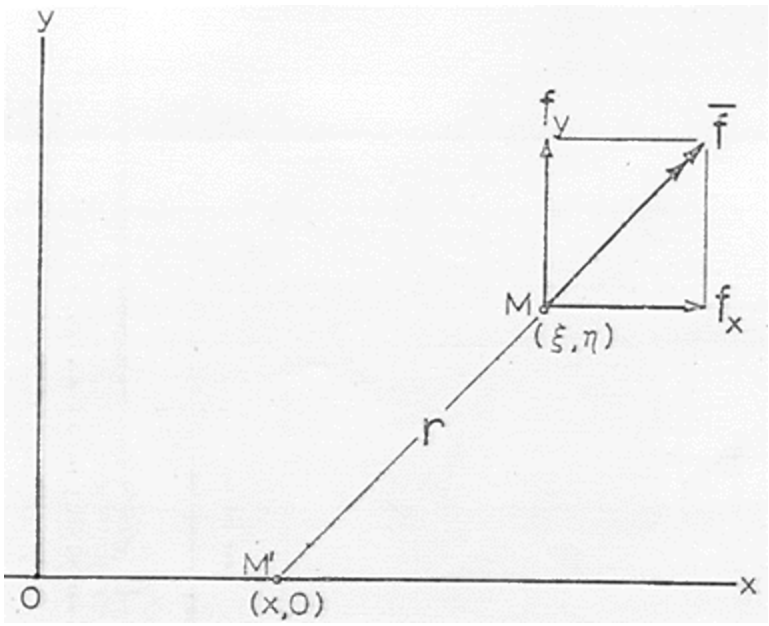
Figure 2: Coulomb's Law



The vector nature of Eq. (1), the fact that f's line of action is colinear with the straight-line distance *r* between poles, its superposition properties when applied to multiple poles, and its restriction to static systems fixes in space are all well known conditions on Eq. (1). We will use the superposition property of Eq. (1) to extend its application to a spatial domain containing many more poles than the two shown in Fig. 2. However, Eq. (1) will first be resolved into scalar components so that analytical expressions can be more easily developed.

Our analysis will be two-dimensional and coplanar, restricted to the vertical x-y plane. It should be noted that the horizontal stator "track" of H.R. Johnson's linear model comprises a plurality of flat magnets, rectangular in cross section, each having an aspect ratio (length-to-thickness ratio) of 16. This high value contributes to the two-dimensional nature of the model and helps to minimize and effects in the z direction. Thus there is some justification for a two-dimensional analysis, at least in the case of the linear model we are considering here.

Figure 3: Positional Locations of Two Opposing North monopoles in X-Y Space ~



As shown in Fig. 3, we consider first a north pole of strength M located at coordinates (*E* [epsilon], *n* [nu]) with a second north pole of strength M', located on the x-axis at (x,0). Force *f*, acting on the monopole at (*E*,*n*), when resolved into its horizontal and vertical components yields, respectively,

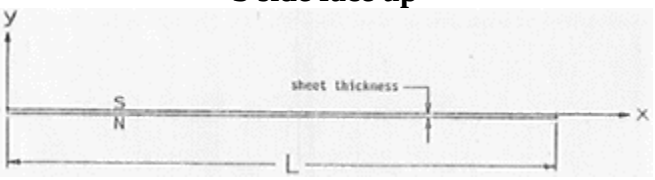
$$f_x = \frac{MM'(\xi - x)}{\mu[(\xi - x)^2 + \eta^2]^{3/2}} \tag{2}$$

and

$$f_y = \frac{MM'\eta}{\mu[(\xi - x)^2 + \eta^2]^{3/2}} \tag{3}$$

2. The Attractive Sheet

Figure 4: Spatial Orientation of Thin, Magnetized Sheet having high aspect ratio and with S side face up



To illustrate some of the assumptions and extensions of Coulomb’s Law that will be made, the simple example of a magnetic sheet lying along the x-axis will be considered first (see Fig. 4). The sheet, of finite length L, is a permanent magnet magnetized across its y-direction thickness and having a high aspect ratio (to eliminate z-direction edge effects). The south-pole face will be oriented up, with north facing downward on the underside of the sheet. Underside effects will be ignored as though the sheet represented a continuous distribution of only south monopoles along the x-axis. To incorporate such distributions into Eq. (1) we replace M’ with the differential dM’ and introduce the function B(x) so that

(4) dM’ = B(x) dx

Then the magnitude of the total force vector, F, acting on an isolated north monopole of strength M situated somewhere within the upper half of the x-y plane, becomes

$$F = \frac{ML}{\mu}\int_0 \frac{B(x)}{r^2}\,dx$$

(5)

where x is the ratio x/L. Assuming that the magnetic density along the sheet can be represented by the southern constant *-B,* and neglecting end effects at x = 0 and x = L, Eq (5) reduces to

$$F = -\mathcal{F}\int_0^1 \frac{1}{\rho^2}\,dx$$

(6)

where

$$\mathcal{F} \equiv \left|\frac{MM'}{\mu L^2}\right|$$

(7)

the strength parameter M’ having been determined by integrating Eq (4) over the sheet length L, and *p* is the ratio r/L.

Figure 5: North Monopole Positioned Symmetrically above the center of a magnetized, attracting sheet

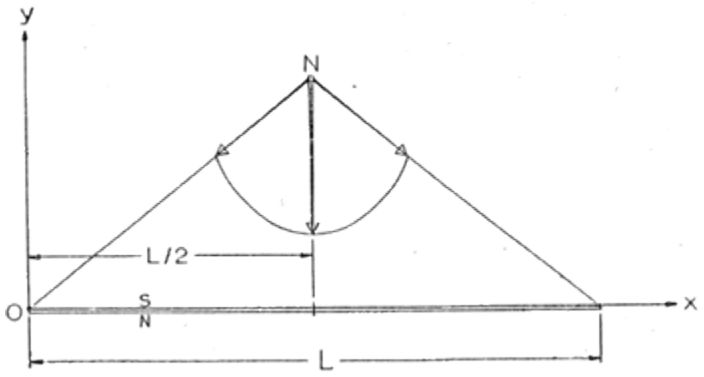
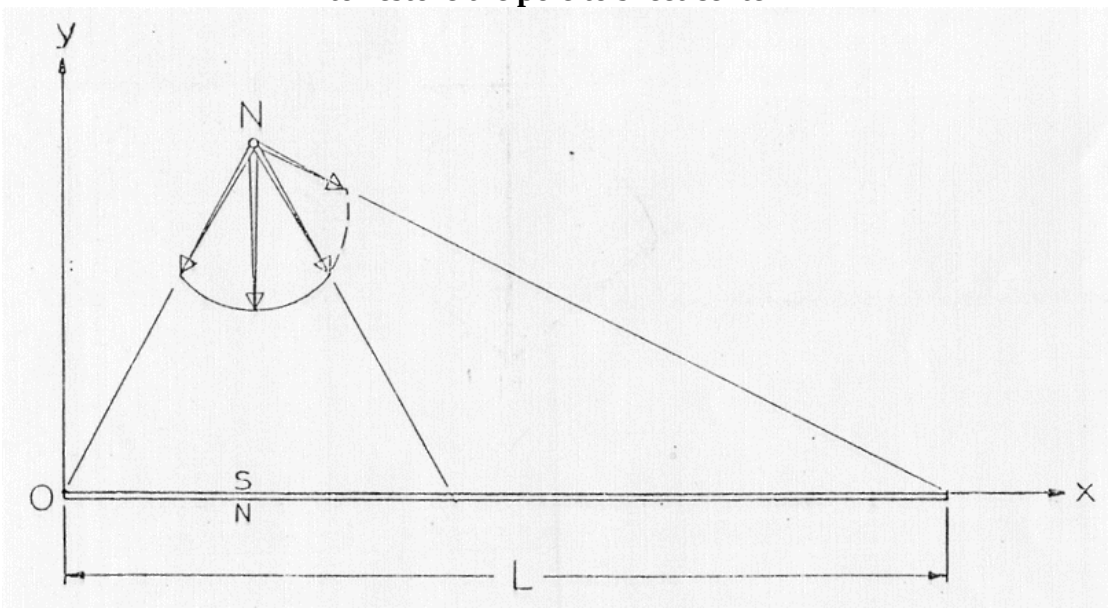


Figure 6: Force Imbalance Acting on a North Monopole above a mangetized sheet tending to restore the pole to sheet center



If the north monopole is placed directly above the center of the sheet, at coordinates (*E, n*), with *E* = L/2 and the vertical air-gap separation distance n taken as arbitrary, the symmetrical distribution of incremental force vectors acting at (*E,n*) will appear as shown in Fig. 5. Note that a shift of the north monopole to the left results in a force imbalance which tends to pull the pole back to the right, as shown in Fig. 6. So considering now only the x-component of F, similar to Eq (2) we write

$$F_x = \mathcal{F} \int_0^1 \frac{X - x}{[(X - x)^2 + Y^2]^{3/2}} dx \tag{8}$$

where X and Y are the dimensionless ratios

$$X \equiv E/L \tag{9}$$

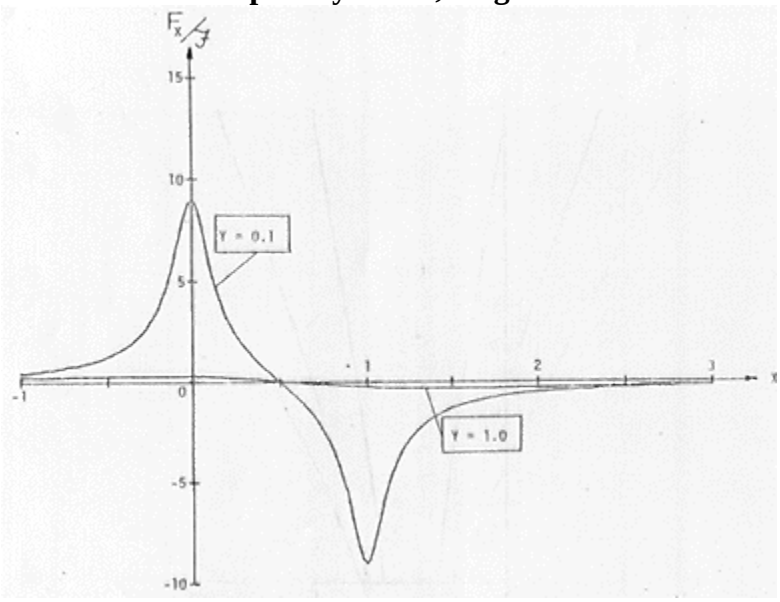
and

$$Y \equiv n/L \tag{10}$$

For any fixed position (X,Y) of the north monopole in the upper half plane, Eq (8) can be integrated to give

$$\frac{F_x}{\mathcal{F}} = \frac{1}{\sqrt{X^2 + Y^2}} - \frac{1}{\sqrt{(X - 1)^2 + Y^2}} \tag{11}$$

Figure 7: X-Direction Distribution of the X-Component of attractive force exerted on a north monopole by a thin, magnetized sheet



This ratio is shown in Fig (7) as a continuous function of X locations with Y treated parametrically. The Y = 1 curve represents the field influence on the north monopole situated at a constant air-gap separation (n = L) quite some vertical distance above the sheet; whereas at Y = 0.1 the monopole is located much closer to the x axis. Reversal of the force component through its zero value at mid-sheet (X = ½) is clearly shown.

In order to trace some trajectories through this field, we now observe that the y-component of force $\underline{F}$ will be

$$\frac{F_Y}{\mathcal{F}} = -\frac{1}{Y}\left[\frac{X}{\sqrt{X^2+Y^2}} - \frac{X-1}{\sqrt{(X-1)^2+Y^2}}\right] \quad (12)$$

This function is shown in Fig (8) with a Y value of 0.20

Figure 8: [Missing]

In dimensionless form the equations of motion for trajectory paths of the monopole above the sheet in planar X-Y space become

$$\frac{d^2X}{d\tau^2} = E(r_X)_{mag} \tag{13}$$

and

$$\frac{d^2Y}{d\tau^2} = E(r_Y)_{mag} - G \tag{14}$$

where

$$\tau \equiv \frac{t}{T} \tag{15}$$

$$G \equiv \frac{gT^2}{L} \tag{16}$$

and

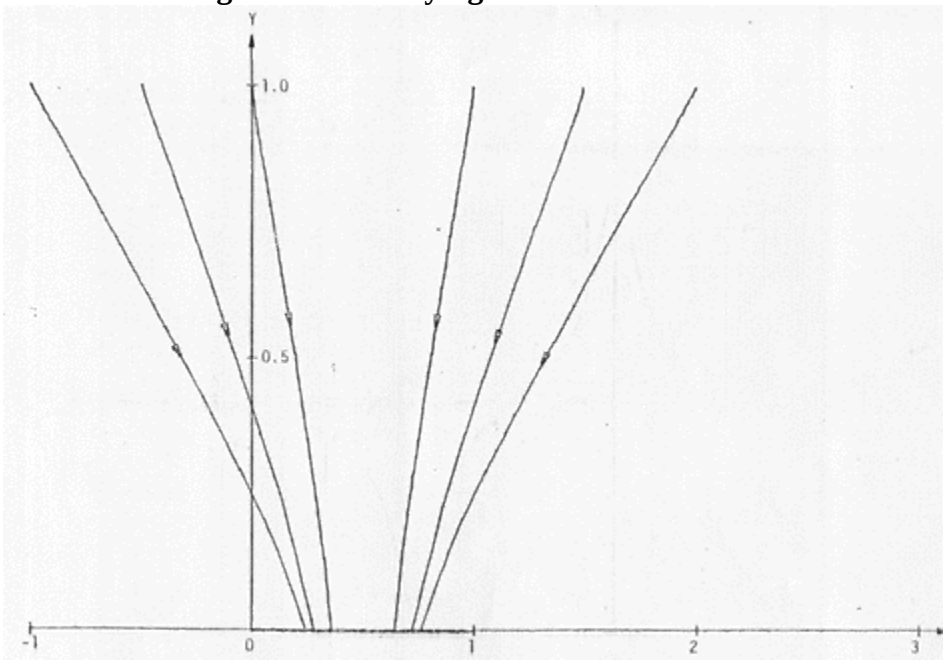
$$E \equiv \frac{G}{(W/T)} \tag{17}$$

In these expression *t* is real time and *T* is simply a time constant chosen arbitrarily. As previously noted, *L* is the length of the sheet; whereas, *g* is the gravitational acceleration constant and *W* is the downward weight force of the moving monopole above the sheet. For magnetic force terms $(r_x)_{mag}$ and $(r_y)_{mag}$ we substitute directly Eq (11) and Eq (12), respectively.

Several of the trajectories resulting from the integration of Eq (13) and Eq (14) are shown in Fig.9. They all exhibit the expected behavior. As already implied in the discussion of Fig. 7, the function $(r_x)_{mag}$ given by Eq (11) has a stable point of equilibrium at X = ½ and therefore drives the free-falling monopole towards the sheet center, regardless of the initial drop-point location. The function $(r_y)_{mag}$ from Eq (12) is equally persuasive in pulling the monopole down towards the sheet itself, and manifests that attraction quite pervasively throughout the integration of Eq (14), even when the *G* term may be omitted (as it was in the trajectories of Fig. 9). Actually, the

computer integration procedure will not carry the monopole all the way to surface contact with the sheet at Y = 0 because of the infinite condition which exists there as reflected by Eq (12). Thus, tailings of these trajectories (Fig 9) have been completed by manually overriding the plotter.

Figure 9: Trajectories of a North Monopole in an attractive field generated by the thin, magnetized sheet lying in the X-interval 0-1



As we would anticipate in working with this type of central field, where *B* in Eq (4) is a simple constant, the field is conservative with curl of F vanishing. Also, the reverse symmetry of $(r_x)_{mag}$ about X = ½, as seen in Fig. 7, confirms that the energy integral for this function will vanish without any appropriate limit pairs of X.

3. The Repulsive Sheet

By substituting +*B* instead of -*B* for *B* in Eq (4), the sheet of length L lying along the x-axis becomes repulsive, with its northern face directed upward, opposing the north monopole above it at location (*E*,*n*). Of course the sign in Eq (6) becomes positive and the functions $(r_x)_{mag}$ and $(r_y)_{mag}$ reverse their behavior accordingly, as illustrated in Fig. 10. Again $(r_x)_{mag}$ will have an equilibrium point at X = ½, but now it is destabilizing. As a consequence, resulting trajectories for the north monopole are much more interesting in this case than they were with the attractive sheet. Several paths are shown in Fig 11 with different values used for the W/*J* trajectory in Eq (17). Parameter G was included, and in each example the trajectories commenced at (0.9, 0.2) with zero initial velocity.

Figure 10: X-Direction Distributions of $(r_x)_{mag}$ and $(r_y)_{mag}$ for the repulsive field of a thin, magnetized sheet acting on a moving north monopole

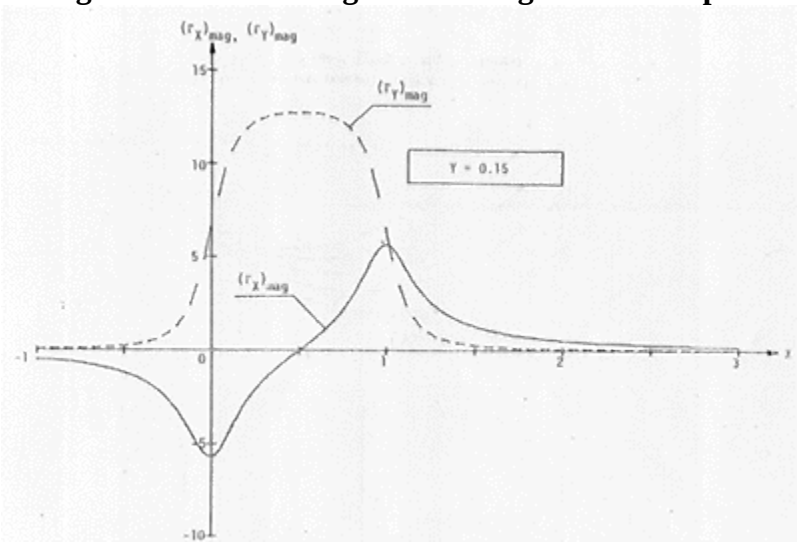
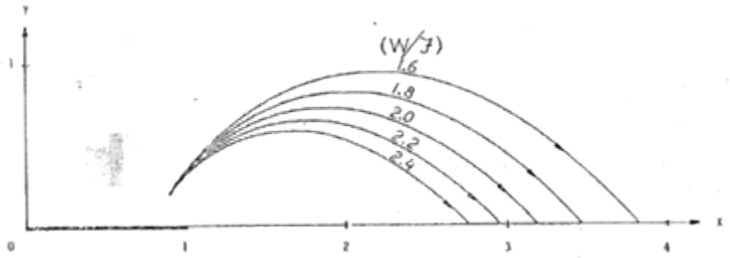


Figure 11: Trajectories of a North Monopole in a repulsive field generated by a thin, magnetized sheet lying in the X-interval 0-1



The attractive and repulsive sheet results are easily demonstrated since rubberized flexible sheet magnets are commercially available, such as those sold by the Permag Corp. of Jamaica, NY. It may also be interesting to note that with slight modifications this first simple analytical sheet model can be used to gain some insight into operation of the so-called "magnetic Wankel" reported on by Scott (1979).

Figure 12: Pole Strength Influence Factor, M', as a cosine function of linear displacement

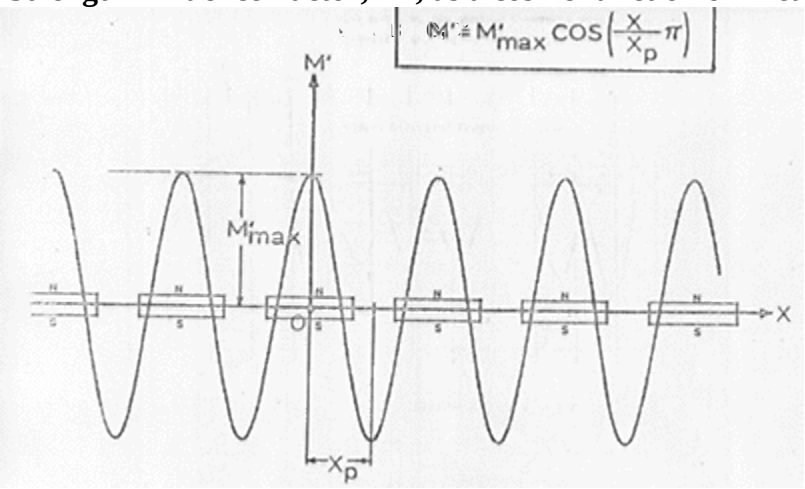
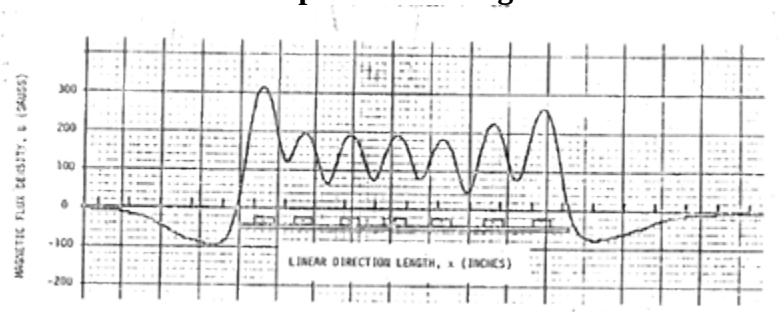


Figure 13: Experimentally Detemined Magnetic Flux Density, B, along a linear model of the Johnson permanent magnet motor



4. The Sinusoidal Model

The first paper (Harrison, 1979) relating, indirectly, to any mathematical analysis of the permanent magnet motor adopted a cosine function (Fig 12) to simulate the distribution of influence parameter M’ generated by the flat stator track of Mr Johnson’s linear model. An experimentally determined distribution, shown in Fig 13, was obtained by moving a Hall-effect probe over the stator track of one of Mr Johnson’s early linear models having seven flat ceramic magnet elements. The figure shown was produced by a plotter connected directly to the monitor computer controlling positioning of the Hall probe and processing its output signal. Ordinate values on the graph are magnetic flux density in gauss measured relative to a predetermined background value. These direct-reading experimental results suggest that the function

(18) $$B(x) = \beta \cos (2\pi x/x_p)$$

substituted into Eq (4) should prove interesting to pursue as a more challenging test of what might be gleaned from this simple Coulomb model we have been discussing. It should be noted

that one of the important differences between the function (18) and that shown in Fig 12 is that in Eq (18) the period length parameter xp is double that shown in Figure 12.

Using Eq (18), the total force magnitude expression Eq (5) becomes

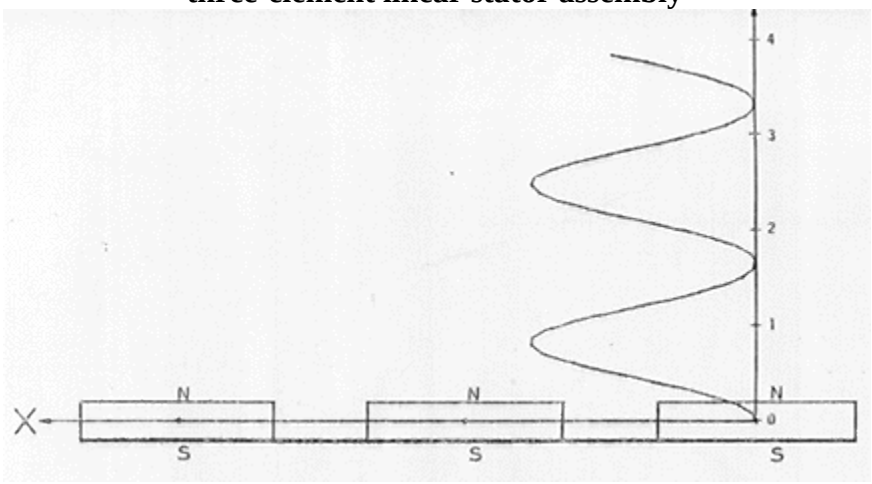
$$(r_x)_{mag} \equiv \frac{F_x}{\mathcal{J}} = \int_0^1 \frac{(X - x)\cos(2\pi x/x_p)}{[(X - x)^2 + Y^2]^{3/2}}\, dx \tag{19}$$

where a total track length distance of L has been used to form the dimensionless ratios p = r/L, x = x/L, and xp = xp/L. Also, if Eq (7) is used for $\mathcal{J}$ in Eq (19), then in that expression one must substitute the product BL for M’.

Now we plan to hold Y constant while investigating linear motion of the monopole along this track in the X-direction only. So we need consider only the X-component of $\underline{F}$ from Eq (19) which yields

$$(r_x)_{mag} \equiv \frac{F_x}{\mathcal{J}} = \int_0^1 \frac{(X - x)\cos(2\pi x/x_p)}{[(X - x)^2 + Y^2]^{3/2}}\, dx \tag{20}$$

Figure 14: Oscillatory Path of a North Monopole restrained to x-direction motion over a three-element linear stator assembly



With this expression substituted into Eq (13), integration becomes straightforward and yields the typical oscillatory type of trajectory path shown in Fig 14. As Mr Johnson has brought out, the focusing armature magnet of his linear model will start at either end of the stator track simply by insuring that the north end of this bipoled crescent is leading the south (see Fig. 1). So, in Fig. 14, we are showing the X-direction motion from right to left instead of from left to right as in our previous examples. Also, by simply rotating the figure clockwise through 90 degrees, it becomes easy to follow the behavior of dimensionless velocity, V_x, in Fig 11, since Vx is defined as

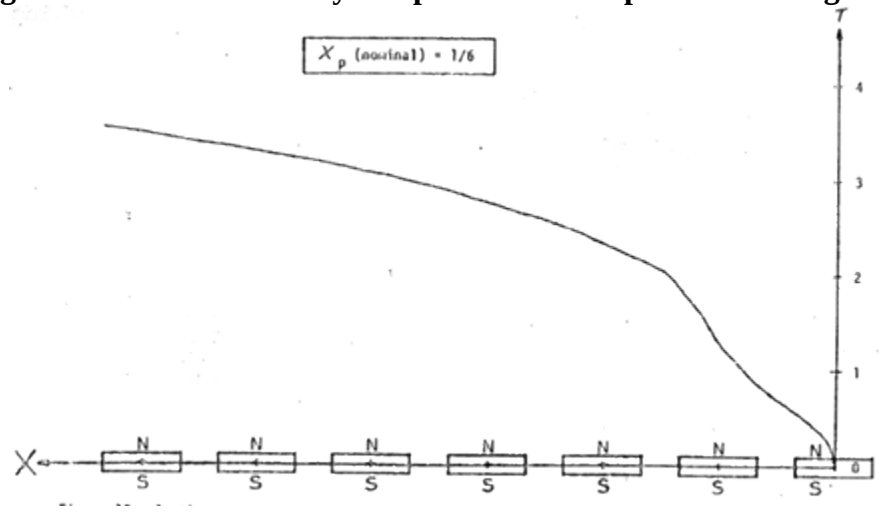
(21) $$V_x = \frac{dX}{d\tau}$$

It will be noted in Fig 14 that the north monopole has been allowed to self-start its motion at the origin with V_x initially zero.

We now discuss out final adjustment which proved to be an exciting revelation at the time it was first investigated several months ago. Johnson (1979, col. 5, line 39) states that the horizontal air-gap spacing between the magnet elements which the stator track comprises should vary slightly from normal in order to smooth out movement of the armature. Introducing this type of variation into a two-dimensional model, provided the charge is nonuniform, would certainly transform the field from conservative to nonconservative. It should by now be apparent that only a nonconservative model has any chance at all of even partially explaining the phenomena of the permanent magnet motor.

With these thoughts in mind, an attempt was made to drive the armature monopole of Fig 14 on to the second stator magnet and beyond by varying the horizontal gap parameter xp during the integration process (i.e., during the motion). The results are shown in Fig 15. It was found that through small variations in *xp* in Eq (20), as the monopole advanced along its trajectory path from one X position to another, sufficient control over the moving pole could be exercised to carry it over the full length of the stator and beyond.

Figure 15: Continuus Path of a North Monopole restrained to x-direction motion shown traversing a linear stator assembly comprised of seven permanent magnet elements



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Harrison, William P., Jr.: "A Solution for the Optimal Gap of a Monopole Element Moving in a Sinusoidally Distributed Magnetic Field", paper presented to the Engineering Section, Virginia Academy of Science, 57th Annual Meeting, Richmond VA, May 8-11, 1979.

Johnson, Howard R: US Patent # 4,151,431 (April 24, 1979), "Permanent Magnet Motor".

Scott, David, "Magnetic ‘Wankel’ for Electric Cars", *Popular Science*, p. 80, June 1979.

US Patent # 4,151,431

Permanent Magnet Motor
(April 24, 1979)

Howard R. Johnson

Abstract --- The invention is directed to the method of utilizing the unpaired electron spins in ferro magnetic and other materials as a source of magnetic fields for producing power without any electron flow as occurs in normal conductors, and to permanent magnet motors for utilizing this method to produce a power source. In the practice of the invention the unpaired electron spins occurring within permanent magnets are utilized to produce a motive power source solely through the superconducting characteristics of a permanent magnet and the magnetic flux created by the magnets are controlled and concentrated to orient the magnetic forces generated in such a manner to do useful continuous work, such as the displacement of a rotor with respect to a stator. The timing and orientation of magnetic forces at the rotor and stator components produced by permanent magnets to produce a motor is accomplished with the proper geometrical relationship of these components.

Inventors: Johnson; Howard R. (3300 Mt. Hope Rd., Grass Lake, MI 49240)
Appl. No.: 422306 ~ Filed: December 6, 1973

Current U.S. Class: 310/12; 310/152; 415/10; 415/916; 416/3; 505/877
Intern'l Class: H02K 041/00; H02N 011/00
Field of Search: 24/DIG. 9 415/DIG. 2 46/236 ;134 A;135 A;136 B;137 AE;138 A 273/118 A,119 A,120 A,121 A,122 A,123 A,124,125 A, 126 A,130 A,131 A,131 AD

References Cited:

U.S. Patent Documents
4,074,153 (Feb., 1978) Baker, et al. 310/12.

Description

FIELD OF THE INVENTION

The invention pertains to the field of permanent magnet motor devices solely using the magnetic fields created thereby to product motive power.

BACKGROUND OF THE INVENTION

Conventional electric motors employ magnetic forces to produce either rotative or linear motion. Electric motors operate on the principle that when a conductor is located in a magnetic field which carries current a magnetic force is exerted upon it.

Normally, in a conventional electric motor, the rotor, or stator, or both, are so wired that magnetic fields created by electromagnetics may employ attraction, repulsion, or both types of magnetic forces, to impose a force upon the armature to cause rotation, or to cause the armature to be displaced in a linear path. Conventional electric motors may employ permanent magnets either in the armature or stator components, but in the art heretofore known the use of permanent magnets in either the stator or armature require the creation of an electromagnetic field to act upon the field produced by the permanent magnets, and switching means are employed to control the energization of the electromagnets and the orientation of the magnetic fields, to produce the motive power.

It is my belief that the full potential of magnetic forces existing in permanent magnets has not been recognized or utilized because of incomplete information and theory with respect to the atomic motion occurring within a permanent magnet. It is my belief that a presently unnamed atomic particle is associated with the electron movement of a superconducting electromagnet and the lossless current flow of Amperian currents in permanent magnets. The unpaired electron flow is similar in both situations. This small particle is believed to be opposite in charge and to be located at right angles to the moving electron, and the particle would be very small as to penetrate all known elements, in their various states as well as their known compounds, unless they have unpaired electrons which capture these particles as they endeavor to pass therethrough.

Ferro electrons differ from those of most elements in that they are unpaired, and being unpaired they spin around the nucleus in such a way that they respond to magnetic fields as well as creating one themselves. If they were paired, their magnetic fields would cancel out. However, being unpaired they create a measurable magnetic field if their spins have been oriented in one direction. The spins are at right angles to their magnetic fields.

In niobium superconductors at a critical state, the magnetic lines of force cease to be at right angles. This change must be due to establishing the required conditions for unpaired electronic spins instead of electron flow in the conductor, and the fact that very powerful electromagnets that can be formed with superconductors illustrates the tremendous advantage of producing the magnetic field by unpaired electron spins rather than conventional electron flow.

In a superconducting metal, wherein the electrical resistance becomes greater in the metal than the proton resistance, the flow turns to electron spins and the positive particles flow parallel in the metal in the manner occurring in a permanent magnet where a powerful flow of magnetic positive particles or magnetic flux causes the unpaired electrons to spin at right angles. Under cryogenic superconduction conditions the freezing of the crystals in place makes it possible for the spins to continue, and in a permanent magnet the grain orientation of the magnetized material results in the spins permitting them to continue and for the flux to flow parallel to the metal.

In a superconductor, at first the electron is flowing and the positive particle is spinning; later, when critical, the reverse occurs, i.e., the electron is spinning and the positive particle is flowing

at right angles. These positive particles will thread or work their way through the electron spins present in the metal.

In a sense, a permanent magnet may be considered the only room temperature superconductor. It is a superconductor because the electron flow does not cease, and this electron flow can be made to do work because of the magnetic field it supplies. Previously, this source of power has not been used because it was not possible to modify the electron flow to accomplish the switching functions of the magnetic field. Such switching functions are common in a conventional electric motor where electrical current is employed to align the much greater electron current in the iron pole pieces and concentrate the magnetic field at the proper places to give the thrust necessary to move the motor armature. In a conventional electric motor, switching is accomplished by the use of brushes, commutators, alternating current, or other known means.

In order to accomplish the switching function in a permanent magnet motor, it is necessary to shield the magnetic leakage so that it will not appear as too great a loss factor at the wrong places. The best method to accomplish this is to use the superconductor of magnetic flux and concentrate it to the place where it will be the most effective. Timing and switching can be achieved in a permanent magnet motor by concentrating the flux and using the proper geometry of the motor rotor and stator to make most effective use of the magnetic fields generated by the electron spins. By the proper combination of materials, geometry and magnetic concentration, it is possible to achieve a mechanical advantage of high ratio, greater than 100 to 1, capable of producing a continuous motive force.

To my knowledge, previous work done with permanent magnets, and motive devices utilizing permanent magnets, have not achieved the result desired in the practice of the inventive concept, and it is with the proper combination of materials, geometry and magnetic concentration that the presence of the magnetic spins within a permanent magnet may be utilized as a motive force.

SUMMARY OF THE INVENTION

It is an object of the invention to utilize the magnetic spinning phenomenon of unpaired electrons occurring in ferro magnetic material to produce the movement of a mass in a unidirectional manner as to permit a motor to be driven solely by magnetic forces as occurring within permanent magnets. In the practice of the inventive concepts, motors of either linear or rotative types may be produced.

It is an object of the invention to provide the proper combination of materials, geometry and magnetic concentration to utilize the force generated by unpaired electron spins existing in permanent magnets to power a motor. Whether the motor constitutes a linear embodiment, or a rotary embodiment, in each instance the "stator" may consist of a plurality of permanent magnets fixed relative to each other in space relationship to define a track, linear in form in the linear embodiment, and circular in form in the rotary embodiment. An armature magnet is located in spaced relationship to such track defined by the stator magnets wherein an air gap exists therebetween. The length of the armature magnet is defined by poles of opposite polarity, and the length of the armature magnet is disposed relative to the track defined by the stator magnets in

the direction of the path of movement of the armature magnet as displaced by the magnetic forces.

The stator magnets are so mounted that poles of like polarity are disposed toward the armature magnet and as the armature magnet has poles which are both attracted to and repelled by the adjacent pole of the stator magnets, both attraction and repulsion forces act upon the armature magnet to produce the relative displacement between the armature and stator magnets.

The continuing motive force producing displacement between the armature and stator magnets results from the relationship of the length of the armature magnet in the direction of its path of movement as related to the dimension of the stator magnets, and the spacing therebetween, in the direction of the path of armature magnet movement. This ratio of magnet and magnet spacings, and with an acceptable air gap spacing between the stator and armature magnets, will produce a resultant force upon the armature magnet which displaces the armature magnet across the stator magnet along its path of movement.

In the practice of the invention movement of the armature magnet relative to the stator magnets results from a combination of attraction and repulsion forces existing between the stator and armature magnets. By concentrating the magnetic fields of the stator and armature magnets the motive force imposed upon the armature magnet is intensified, and in the disclosed embodiments such magnetic field concentration means are disclosed.

The disclosed magnetic field concentrating means comprise a plate of high magnetic field permeability disposed adjacent one side of the stator magnets in substantial engagement therewith. This high permeability material is thus disposed adjacent poles of like polarity of the stator magnets. The magnetic field of the armature magnet may be concentrated and directionally oriented by bowing the armature magnet, and the magnetic field may further be concentrated by shaping the pole ends of the armature magnet to concentrate the magnet field at a relatively limited surface at the armature magnet pole ends.

Preferably, a plurality of armature magnets are used which are staggered with respect to each other in the direction of armature magnet movement. Such an offsetting or staggering of the armature magnets distributes the impulses of force imposed upon the armature magnets and results in a smoother application of forces to the armature magnet producing a smoother and more uniform movement of the armature component.

In the rotary embodiment of the permanent magnet motor of the invention the stator magnets are arranged in a circle, and the armature magnets rotate about the stator magnets. Means are disclosed for producing relative axial displacement between the stator and armature magnets to adjust the axial alignment thereof, and thereby regulate the magnitude of the magnetic forces being imposed upon the armature magnets. In this manner the speed of rotation of the rotary embodiment may be regulated.

BRIEF DESCRIPTION OF THE DRAWINGS

The aforementioned objects and advantages of the invention will be appreciated from the following description and accompanying drawings wherein:

FIG. 1 is a schematic view of electron flow in a superconductor indicating the unpaired electron spins,

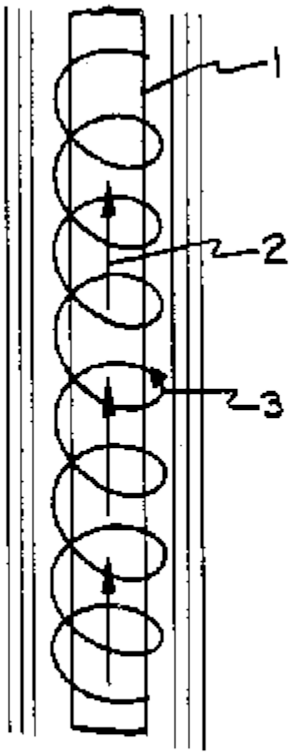

FIG. 1

FIG. 2 is a cross-sectional view of a superconductor under a critical state illustrating the electron spins,

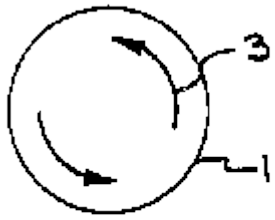

FIG. 2

FIG. 3 is a view of a permanent magnet illustrating the flux movement therethrough,

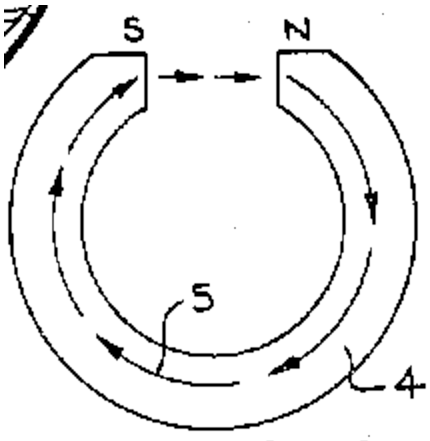

FIG. 3

FIG. 4 is a cross-sectional view illustrating the diameter of the magnet of FIG. 3,

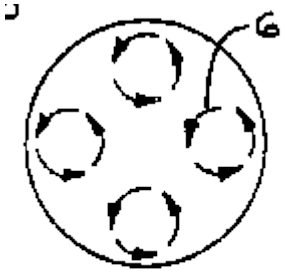

FIG. 4

FIG. 5 is an elevational representation of a linear motor embodiment of the permanent magnet motor of the invention illustrating one position of the armature magnet relative to the stator magnets, and indicating the magnetic forces imposed upon the armature magnet,

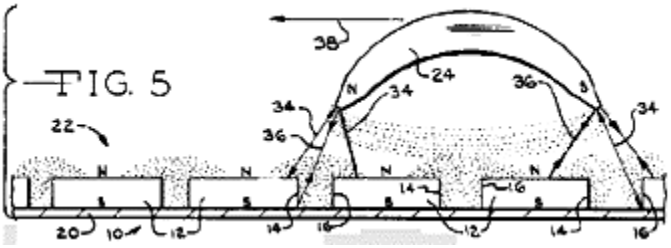

FIG. 6 is a view similar to FIG. 5 illustrating displacement of the armature magnet relative to the stator magnets, and the influence of magnetic forces thereon at this location,

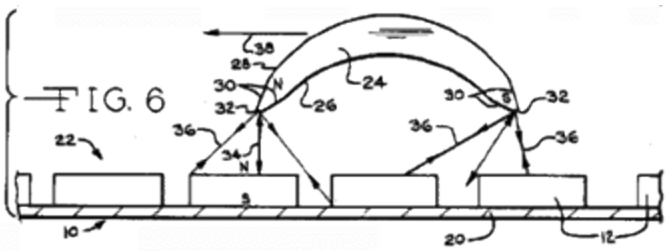

FIG. 7 is a further elevational view similar to FIGS. 5 and 6 illustrating further displacement of the armature magnet to the left, and the influence of the magnetic forces thereon,

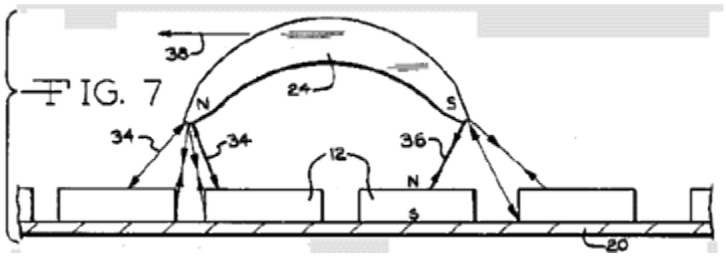

FIG. 8 is a top plan view of a linear embodiment of the inventive concept illustrating a pair of armature magnets in linked relationship disposed above the stator magnets,

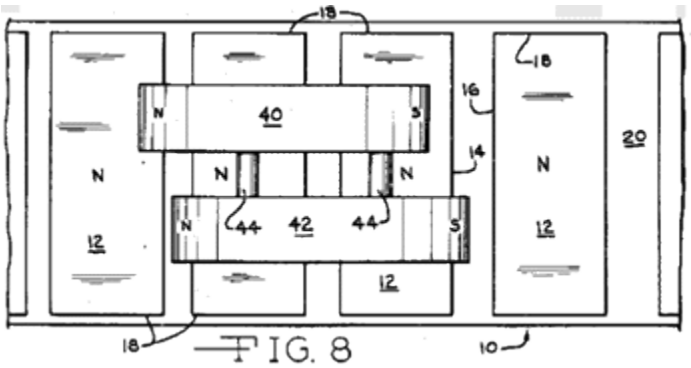

FIG. 9 is a diametrical, elevational, sectional view of a rotary motor embodiment in accord with the invention as taken along section IX--IX of FIG. 10, and

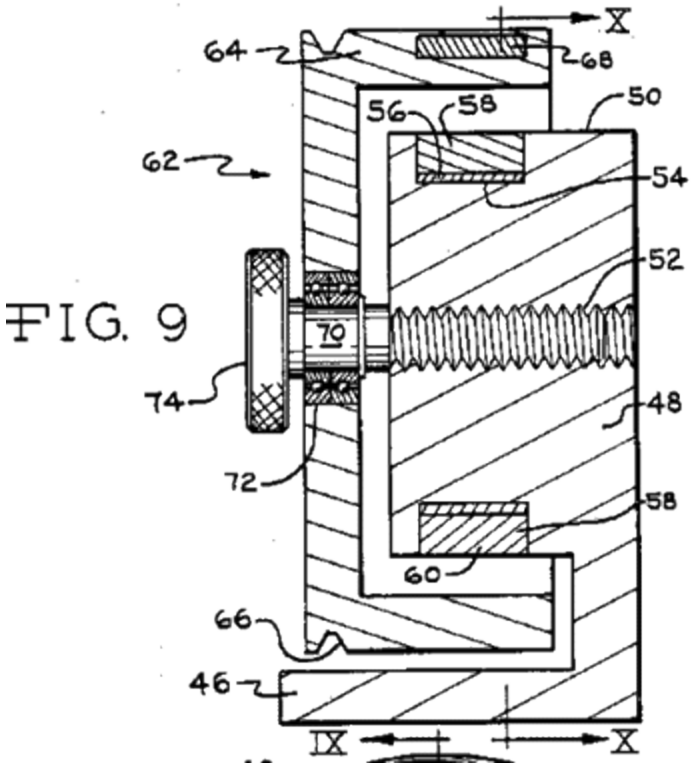

FIG. 9

FIG. 10 is an elevational view of the rotary motor embodiment as taken along section X--X of FIG. 9.

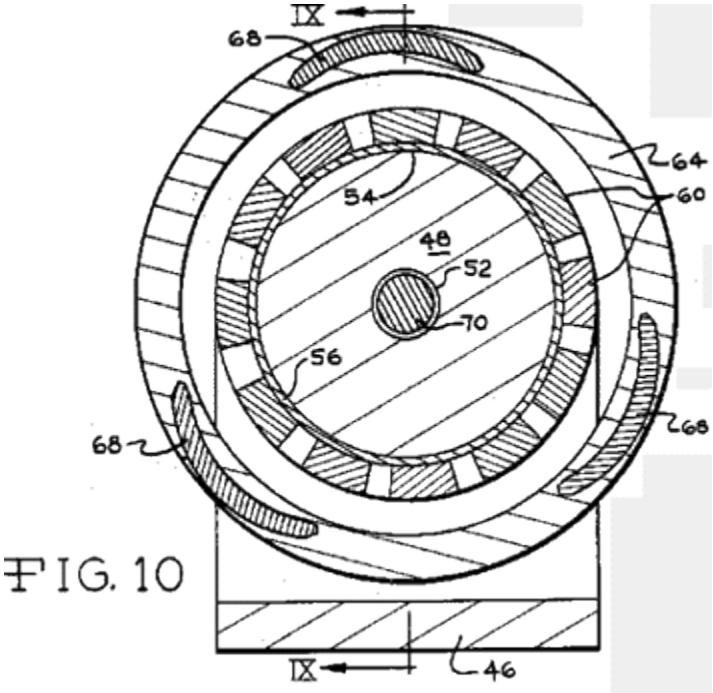

FIG. 10

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In order to better understand the theory of the inventive concept, reference is made to FIGS. 1 through 4. In FIG. 1 a superconductor 1 is illustrated having a positive particle flow as represented by arrow 2, the unpaired electrons of the ferrous conducting material 1 spin at right angles to the proton flow in the conductor as represented by the spiral line and arrow 3. In accord with the theory of the invention the spinning of the ferrous unpaired electrons results from the atomic structure of ferrous materials and this spinning atomic particle is believed to be opposite in charge and located at right angles to the moving electrons. It is assumed to be very small in size capable of penetrating other elements and their compounds unless they have unpaired electrons which capture these particles as they endeavor to pass therethrough.

The lack of electrical resistance of conductors at a critical superconductor state has long been recognized, and superconductors have been utilized to produce very high magnetic flux density electromagnets. FIG. 2 represents a cross section of a critical superconductor and the electron spins are indicated by the arrows 3.

A permanent magnet may be considered a superconductor as the electron flow therein does not cease, and is without resistance, and unpaired electric spinning particles exist which, in the practice of the invention, are utilized to produce motor force. FIG. 3 illustrates a horseshoe shaped permanent magnet at 4 and the magnetic flux therethrough is indicated by arrows 5, the magnetic flow being from the south pole to the north pole and through the magnetic material. The accumulated electron spins occurring about the diameter of the magnet 5 are represented at 6 in FIG. 4, and the spinning electron particles spin at right angles in the iron as the flux travels through the magnet material.

By utilizing the electron spinning theory of ferrous material electrons, it is possible with the proper ferromagnetic materials, geometry and magnetic concentration to utilize the spinning electrons to produce a motive force in a continuous direction, thereby resulting in a motor capable of doing work.

It is appreciated that the embodiments of motors utilizing the concepts of the invention may take many forms, and in the illustrated forms the basic relationships of components are illustrated in order to disclose the inventive concepts and principles.

The relationships of the plurality of magnets defining the stator 10 are best appreciated from FIGS. 5 through 8. The stator magnets 12 are preferably of a rectangular configuration, FIG. 8, and so magnetized that the poles exist at the large surfaces of the magnets, as will be appreciated from the N (North) and S (South) designations. The stator magnets include side edges 14 and 16 and end edges 18. The stator magnets are mounted upon a supporting plate 20, which is preferably of a metal material having a high permeability to magnetic fields and magnetic flux such as that available under the trademark Netic CoNetic sold by the Perfection Mica Company of Chicago, Illinois. Thus, the plate 20 will be disposed toward the south pole of the stator magnets 12, and preferably in direct engagement therewith, although a bonding material may be interposed between the magnets and the plate in order to accurately locate and fix the magnets on the plate, and position the stator magnets with respect to each other.

Preferably, the spacing between the stator magnets 12 slightly differs between adjacent stator magnets as such a variation in spacing varies the forces being imposed upon the armature magnet at its ends, at any given time, and thus results in a smoother movement of the armature magnet relative to the stator magnets. Thus, the stator magnets so positioned relative to each other define a track 22 having a longitudinal direction left to right as viewed in FIGS. 5 through 8.

In FIGS. 5 through 7 only a single armature magnet 24 is disclosed, while in FIG. 8 a pair of armature magnets are shown. For purposes of understanding the concepts of the invention the description herein will be limited to the use of single armature magnet as shown in FIGS. 5 through 7.

The armature magnet is of an elongated configuration wherein the length extends from left to right, FIG. 5, and may be of a rectangular transverse cross-sectional shape. For magnetic field concentrating and orientation purposes the magnet 24 is formed in an arcuate bowed configuration as defined by concave surfaces 26 and convex surfaces 28, and the poles are defined at the ends of the magnet as will be appreciated from FIG. 5. For further magnetic field concentrating purposes the ends of the armature magnet are shaped by beveled surfaces 30 to minimize the cross-sectional area at the magnet ends at 32, and the magnetic flux existing between the poles of the armature magnet are as indicated by the light dotted lines. In like manner the magnetic fields of the stator magnets 12 are indicated by the light dotted lines.

The armature magnet 24 is maintained in a spaced relationship above the stator track 22. This spacing may be accomplished by mounting the armature magnet upon a slide, guide or track located above the stator magnets, or the armature magnet could be mounted upon a wheeled vehicle carriage or slide supported upon a nonmagnetic surface or guideway disposed between the stator magnets and the armature magnet. To clarify the illustration, the means for supporting the armature magnet 24 is not illustrated and such means form no part of invention, and it is to be understood that the means supporting the armature magnet prevents the armature magnet from moving away from the stator magnets, or moving closer thereto, but permits free movement of the armature magnet to the left or right in a direction parallel to the track 22 defined by the stator magnets.

It will be noted that the length of the armature magnet 24 is slightly greater than the width of two of the stator magnets 12 and the spacing therebetween. The magnetic forces acting upon the armature magnet when in the position of FIG. 5 will be repulsion forces 34 due to the proximity of like polarity forces and attraction forces at 36 because of the opposite polarity of the south pole of the armature magnet, and the north pole field of the sector magnets. The relative strength of this force is represented by the thickness of the force line.

The resultant of the force vectors imposed upon the armature magnet as shown in FIG. 5 produce a primary force vector 38 toward the left, FIG. 5, displacing the armature magnet 24 toward the left. In FIG. 6 the magnetic forces acting upon the armature magnet are represented by the same reference numerals as in FIG. 5. While the forces 34 constitute repulsion forces tending to move the north pole of the armature magnet away from the stator magnets, the attraction forces imposed upon the south pole of the armature magnet and some of the repulsion forces, tend to

move the armature magnet further to the left, and as the resultant force 38 continues to be toward the left the armature magnet continues to be forced to the left.

FIG. 7 represents further displacement of the armature magnet 24 to the left with respect to the position of FIG. 6, and the magnetic forces acting thereon are represented by the same reference numerals as in FIGS. 5 and 6, and the stator magnet will continue to move to the left, and such movement continues the length of the track 22 defined by the stator magnets 12.

Upon the armature magnet being reversed such that the north pole is positioned at the right as viewed in FIG. 5, and the south pole is positioned at the left, the direction of movement of the armature magnet relative to the stator magnets is toward the right, and the theory of movement is identical to that described above.

In FIG. 8 a plurality of armature magnets 40 and 42 are illustrated which are connected by links 44. The armature magnets are of a shape and configuration identical to that of the embodiment of FIG. 5, but the magnets are staggered with respect to each other in the direction of magnet movement, i.e., the direction of the track 22 defined by the stator magnets 12. By so staggering a plurality of armature magnets a smoother movement of the interconnected armature magnets is produced as compared when using a single armature magnet as there is variation in the forces acting upon each armature magnet as it moves above the track 22 due to the change in magnetic forces imposed thereon. The use of several armature magnets tends to "smooth out" the application of forces imposed upon linked armature magnets, resulting in a smoother movement of the armature magnet assembly. Of course, any number of armature magnets may be interconnected, limited only by the width of the stator magnet track 22.

In FIGS. 9 and 10 a rotary embodiment embracing the inventive concepts is illustrated. In this embodiment the principle of operation is identical to that described above, but the orientation of the stator and armature magnets is such that rotation of the armature magnets is produced about an axis, rather than a linear movement being achieved.

In FIGS. 9 and 10 a base is represented at 46 serving as a support for a stator member 48. The stator member 48 is made of a nonmagnetic material, such as synthetic plastic, aluminum, or the like. The stator includes a cylindrical surface 50 having an axis, and a threaded bore 52 is concentrically defined in the stator. The stator includes an annular groove 54 receiving an annular sleeve 56 of high magnetic field permeability material such as Netic Co-Netic and a plurality of stator magnets 58 are affixed upon the sleeve 56 in spaced circumferential relationship as will be apparent in FIG. 10. Preferably, the stator magnets 58 are formed with converging radial sides as to be of a wedge configuration having a curved inner surface engaging sleeve 56, and a convex outer pole surface 60.

The armature 62, in the illustrated embodiment, is of a dished configuration having a radial web portion, and an axially extending portion 64. The armature 62 is formed of a nonmagnetic material, and an annular belt receiving groove 66 is defined therein for receiving a belt for transmitting power from the armature to a generator, or other power consuming device. Three armature magnets 68 are mounted on the armature portion 64, and such magnets are of a configuration similar to the armature magnet configuration of FIGS. 5 through 7. The magnets

68 are staggered with respect to each other in a circumferential direction wherein the magnets are not disposed as 120.degree. circumferential relationships to each other. Rather, a slight angular staggering of the armature magnets is desirable to "smooth out" the magnetic forces being imposed upon the armature as a result of the magnetic forces being simultaneously imposed upon each of the armature magnets. The staggering of the armature magnets 68 in a circumferential direction produces the same effect as the staggering of the armature magnets 40 and 42 as shown in FIG. 8.

The armature 62 is mounted upon a threaded shaft 70 by antifriction bearings 72, and the shaft 70 is threaded into the stator threaded bore 52, and may be rotated by the knob 74. In this manner rotation of the knob 74, and shaft 70, axially displaces the armature 62 with respect to the stator magnets 58, and such axial displacement will very the magnitude of the magnetic forces imposed upon the armature magnets 68 by the stator magnets thereby controlling the speed of rotation of the armature.

As will be noted from FIGS. 4-7 and 9 and 10, an air gap exists between the armature magnet or magnets and the stator magnets and the dimension of this spacing, effects the magnitude of the forces imposed upon the armature magnet or magnets. If the distance between the armature magents, and the stator magnets is reduced the forces imposed upon the armature magnets by the stator magnets are increased, and the resultant force vector tending to displace the armature magnets in their path of movement increases. However, the decreasing of the spacing between the armature and stator magnets creates a "pulsation" in the movement of the armature magnets which is objectionable, but can be, to some extent, minimized by using a plurality of armature magnets. The increasing of the distance between the armature and stator magnets reduces the pulsation tendency of the armature magnet, but also reduces the magnitude of the magnetic forces imposed upon the armature magnets. Thus, the most effective spacing between the armature magnets. Thus, the most effective spacing between the armature and stator magnets is that spacing which produces the maximum force vector in the direction of armature magnet movement, with a minimum creation of objectionable pulsation.

In the disclosed embodiments the high permeability plate 20 and sleeve 56 are disclosed for concentrating the magnetic field of the stator magnets, and the armature magnets are bowed and have shaped ends for magnetic field concentration purposes. While such magnetic field concentration means result in higher forces imposed upon the armature magnets for given magnet intensities, it is not intended that the inventive concepts be limited to the use of such magnetic field concentrating means.

As will be appreciated from the above description of the invention, the movement of the armature magnet or magnets resultsfrom the described relationship of components. The length of the armature magnets as related to the width of the stator magnets and spacing therebetween, the dimension of the air gap and the configuration of the magnetic field, combined, produce the desired result and motion. The inventive concepts may be practiced even though these relationships may be varied within limits not yet defined and the invention is intended to encompass all dimensional relationships which achieve the desired goal of armature movement. By way of example, with respect to FIGS. 4-7, the following dimensions were used in an operating prototype:

The length of armature magnet 24 is 31/8", the stator magnets 12 are 1" wide, 1/4" thick and 4" long and grain oriented. The air gap between the poles of the armature magnet and the stator magnets is approximately 11/2" and the spacing between the stator magnets is approximately 1/2" inch.

In effect, the stator magnets define a magnetic field track of a single polarity transversely interrupted at spaced locations by the magnetic fields produced by the lines of force existing between the poles of the stator magnets and the unidirectional force exerted on the armature magnet is a result of the repulsion and attraction forces existing as the armature magnet traverses this magnetic field track.

It is to be understood that the inventive concept embraces an arrangement wherein the armature magnet component is stationary and the stator assembly is supported for movement and constitutes the moving component, and other variations of the inventive concept will be apparent to those skilled in the art without departing from the scope thereof. As used herein the term "track" is intended to include both linear and circular arrangements of the static magnets, and the "direction" or "length" of the track is that direction parallel or concentric to the intended direction of armature magnet movement.

United States Patent 4,877,983

Magnetic Force Generating Method & Apparatus

Howard R. Johnson

(October 31, 1989)

Abstract --- A permanent magnet armature is magnetically propelled along a guided path by interaction with the field within a flux zone limited on either side of the path by an arrangement of permanent stator magnets.

Inventors: Johnson; Howard R. (Box 199, 314 N. Main, Blacksburg, VA 24060)
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Current U.S. Class: 310/12; 310/152 ~ Intern'l Class: H02K 041/00
Field of Search: 310/152,12,46

References Cited:
U.S. Patent Documents
USP # 4,074,153 (Feb., 1978) Baker, et al. (Cl. 310/12).
USP # 4,151,431 (Apr., 1979) Johnson (Cl. 310/12).

Primary Examiner: Skudy; R. ~ Attorney, Agent or Firm: Fleit, Jacobson, Cohn, Price, Holman & Stern

Claims

What is claimed as new is as follows:

1. In combination with a movable armature, means for guiding movement of the armature along a predetermined path and a permanent armature magnet having magnetic poles of opposite polarity spaced from each other along said path to establish a magnetic field of limited extent movable with the armature and magnetic stator means for establishing a stationary magnetic flux zone along said path, the improvement comprising flux emitting surfaces of one polarity mounted on the stator means on opposite sides of said path for limiting said flux zone through which said path extends and means mounting the permanent armature magnet on the armature with the poles thereof orientated relative to said flux emitting surfaces on the stator means for unidirectionally propelling the armature along said path through the limited zone in response to magnetic interaction between the movable magnetic field and the limited flux zone, said magnetic stator means including a plurality of magnetic gate assemblies fixedly spaced from each other along said path and respectively establishing stationary magnetic fields, each of said gate assemblies including a plurality of interconnected bar magnets substantially bordering said limited flux zone exposing pole faces of opposite polarity in parallel spaced planes intersected by said path, and magnetic means connected to said interconnected bar magnets exposing one of the flux emitting surfaces of said one polarity perpendicular to said parallel planes for magnetic interaction of the stationary magnetic fields.

2. The combination of claim 1 wherein said armature magnet is curved between end faces at which said poles of opposite polarity are located, the end faces being orientated by the mounting means in converging relation to each other toward the guiding means.

3. In combination with a movable armature, means for guiding movement of the armature along a predetermined path and a permanent armature magnet having magnetic poles of opposite polarity spaced from each other along said path to establish a magnetic field of limited extent movable with the armature and magnetic stator means for establishing a stationary magnetic flux zone along said path, the improvement comprising flux emitting surfaces of one polarity mounted on the stator means on opposite sides of said path for limiting said flux zone through which said path extends and means mounting the permanent armature magnet on the armature with the poles faces thereof orientated relative to said flux emitting surfaces on the stator means for unidirectionally propelling the armature along said path through the limited zone in response to magnetic interaction between the movable magnetic field and the limited flux zone, said armature magnet being curved between end faces at which said poles of opposite polarity are located, the end faces being orientated by the mounting means in converging relation to each other toward the guiding means.

4. In combination with a movable armature, means for guiding movement of the armature along a predetermined path and a permanent armature magnet having magnetic poles of opposite polarity spaced from each other along said path to establish a magnetic field of limited extent movable with the armature and magnetic stator means for establishing a stationary magnetic flux zone along said path, the improvement comprising flux emitting surfaces of one polarity mounted on the stator means on opposite sides of said path for limiting said flux zone through

which said path extends and means mounting the permanent armature magnet on the armature with the poles thereof orientated relative to said flux emitting surfaces on the stator means for unidirectionally propelling the armature along said path through the limited zone in response to magnetic interaction between the movable magnetic field and the limited flux zone, said magnetic stator means including a pair of permanent magnet assemblies having continuous, confronting pole faces of said one polarity bordering said limited zone, each of said assemblies having means for varying magnetic field intensity in the flux zone along said path, and a second armature magnet connected to the first mentioned armature magnet in mirror image relation thereto.

5. The combination of claim 4 wherein said armature magnet is curved between end faces at which said poles of opposite polarity are located, the end faces being orientated by the mounting means in a plane parallel to said path.

6. In combination with a movable armature, means for guiding movement of the armature along a predetermined path and a permanent armature magnet mounted on the armature having magnetic poles of opposite polarity spaced from each other along said path, the improvement comprising a plurality of permanent magnet gate assemblies mounted in spaced relation to each other along said path establishing interacting stationary magnetic fields along said path, each of said assemblies including stator magnets interconnected in surrounding relation to said path and having pole faces of opposite polarity aligned with parallel planes intersected by said path and magnetic means fixed to the pole faces aligned with one of the parallel planes for interaction of the armature magnet with said stationary magnetic fields for unidirectional propulsion of the armature along said path, said magnetic means being an annular magnet having a radially inner pole surface of one polarity enclosing a magnetic flux zone through which said path extends.

Description

BACKGROUND OF THE INVENTION

This invention relates in general to the use of permanent magnets to generate unidirectional propelling forces.

The generation of unidirectional propelling forces by permanent magnets is already known and recognized in U.S. Pat. Nos. 4,151,431 and 4,215,330 to Johnson and Hartmen, respectively, by way of example. According to applicant's own prior Pat. No. 4,151,431, such forces are generated by magnetic interaction between a curved magnet bar of an armature guided for movement along a circular path and an arrangement of spaced stator magnets having pole faces of one polarity facing the armature on one side thereof parallel to the path of movement.

It is therefore an important object of the present invention to provide certain improved stator arrangements of permanent magnets interacting with a permanent magnet armature for unidirectional propulsion thereof in a novel manner believed to be more efficient.

SUMMARY OF THE INVENTION

In accordance with the present invention, the armature magnet is guided along a path through a magnetic flux zone limited on opposite sides of the path by an arrangement of magnetic pole surfaces of one polarity on stator magnets. According to one embodiment, the flux zone is formed by spaced gate assemblies of magnets having exposed pole faces of one polarity in a plane perpendicular to the armature path from which a magnetic field extends to the opposite pole faces and a ring magnet fixed to such opposite pole faces of the other polarity, with a radially inner pole surface of the same polarity producing a magnetic field perpendicular to the first mentioned field to their opposite radially outer pole surfaces.

According to another embodiment, the flux zone is formed between continuous confronting pole surfaces of one polarity on stator magnets arranged to produce a magnetic field of varying intensity along the armature path.

In yet another embodiment, at least two curved bar magnets are interconnected to form the armature with two pairs of pole faces spaced along the armature path.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a somewhat schematic side elevational view showing an installation of the present invention in accordance with one embodiment, with parts broken away and shown in section.

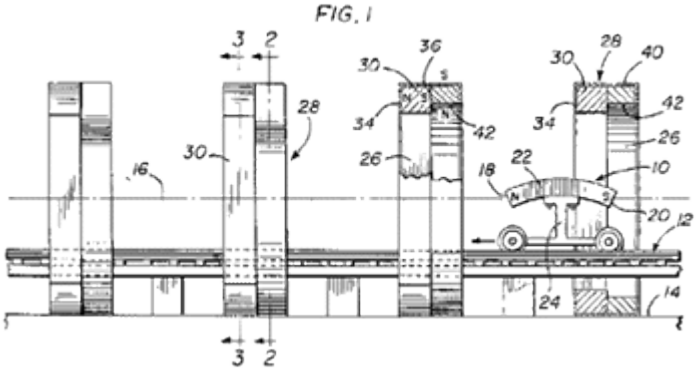


FIG. 2 is a transverse sectional view taken substantially through a plane indicated by section line 2--2 in FIG. 1.

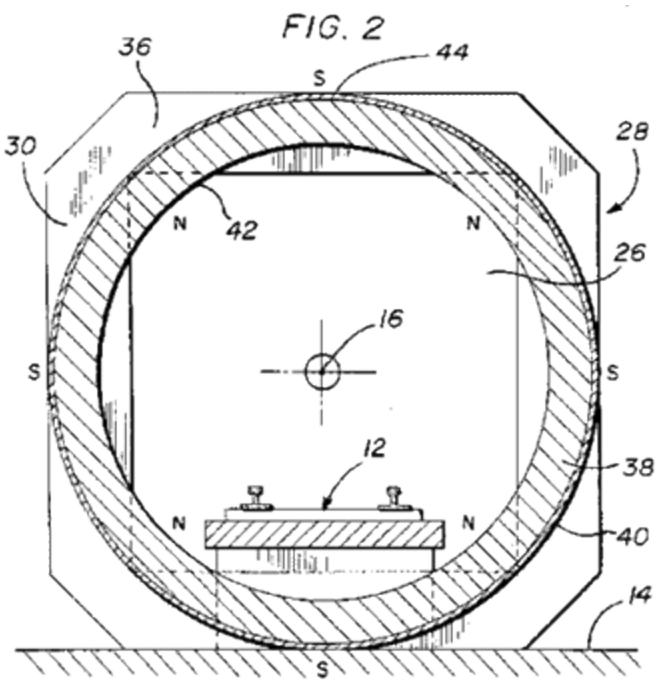


FIG. 3 is an enlarged partial sectional view taken substantially through a plane indicated by section line 3--3 in FIG. 1.

FIG. 3

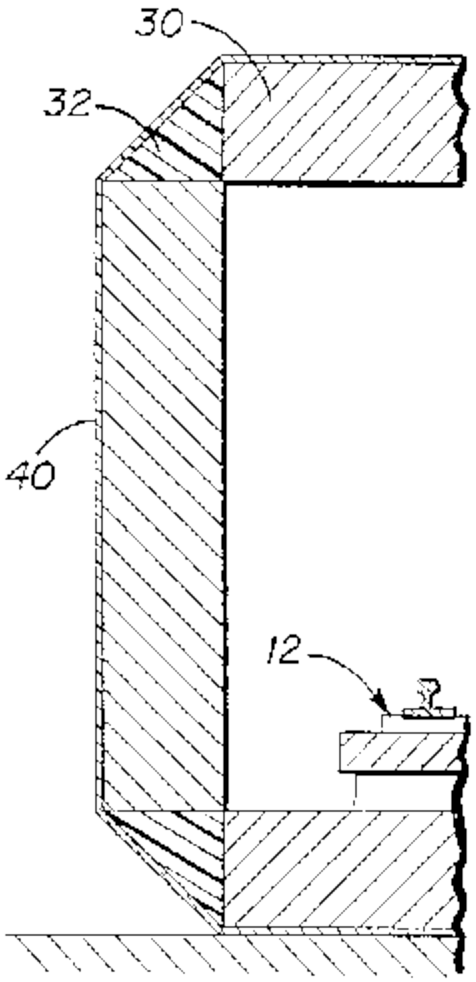


FIG. 4 is a top plan view of an installation in accordance with another embodiment of the invention.

FIG. 4

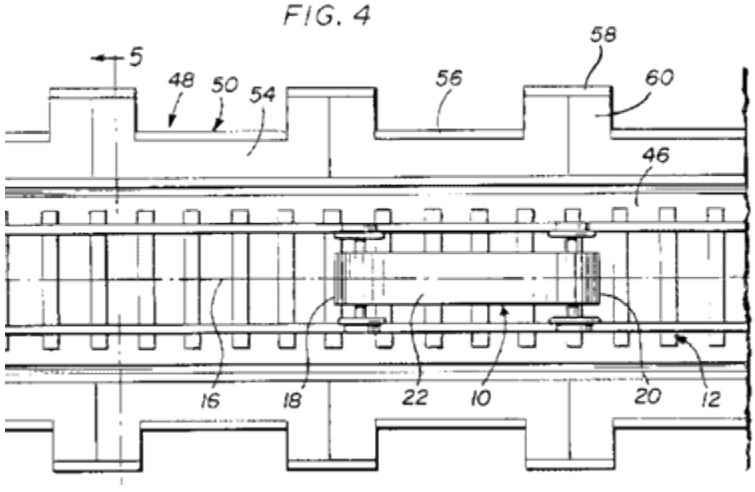


FIG. 5 is a sectional view taken substantially through a plane indicated by section line 5--5 in FIG. 4.

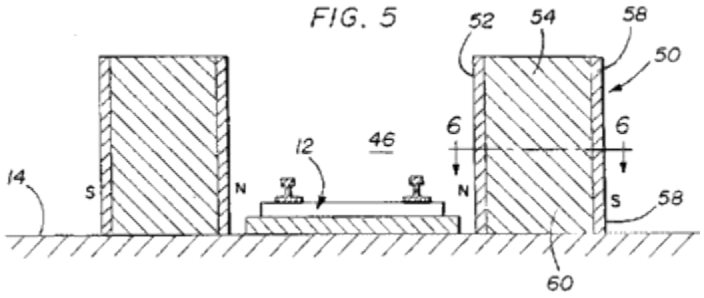


FIG. 6 is a sectional view taken substantially through a plane indicated by section line 5--5 in FIG. 5.

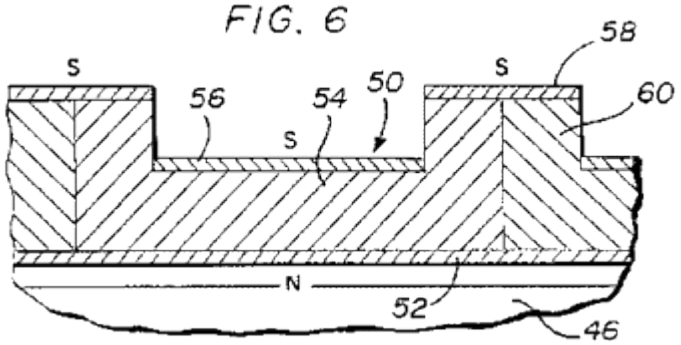


FIG. 7 is a simplified side view through the flux zone shown in FIGS. 4, 5 and 6 with the armature bar magnet positioned therein.

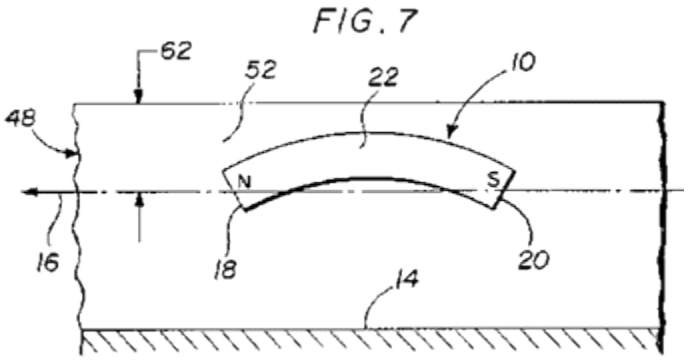


FIG. 8 is a top plan view of an installation in accordance with yet another embodiment.

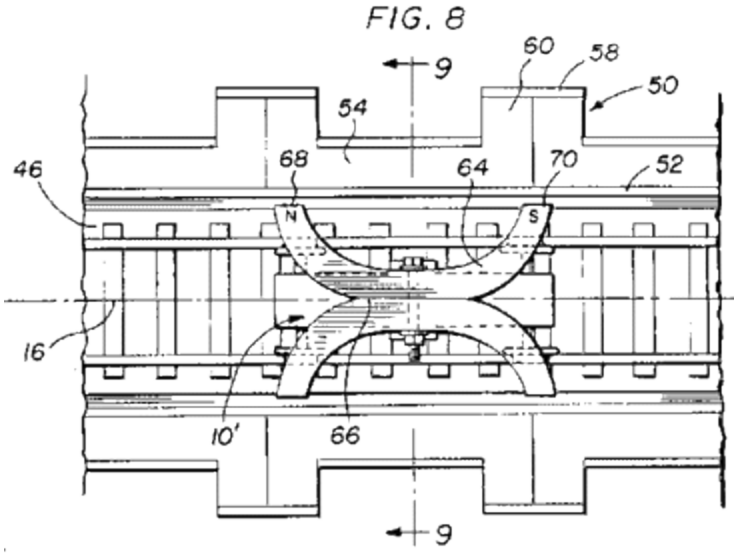
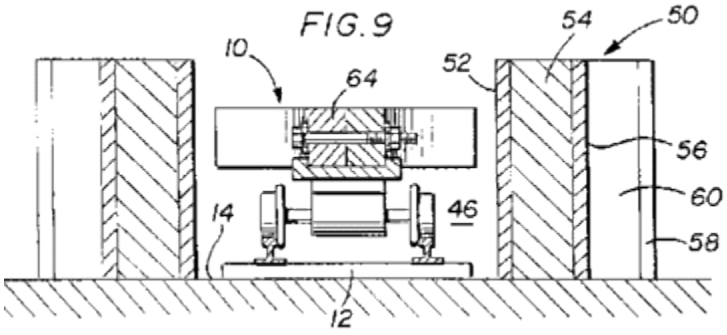


FIG. 9 is an enlarged partial sectional view through a plane indicated by section line 9--9 in FIG. 8.



DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings in detail, FIG. 1 illustrates one embodiment of the invention in which a magnetic armature generally referred to by reference numeral 10 is unidirectionally propelled along a predetermined path established by a motion guiding track 12 fixed to a frame or support 14. The path is represented by a line 16 extending through pole faces 18 and 20 of opposite polarity at the longitudinal ends of a curved armature bar magnet 22. The armature 10 in the illustrated example includes a wheeled vehicle mount 24 to which the armature magnet 22 is fixedly secured with the pole faces 18 and 20 converging toward the guiding track 12. The pole faces 18 and 20 are furthermore orientated so that the magnetic field extending between pole faces 18 and 20 is movable therewith within a flux zone 26 limited in surrounding relation to the guided path at spaced locations by stator gate assemblies 28 formed by permanent magnets fixed to the frame support 14.

Each of the stator gate assemblies 28 as shown in FIGS. 1-3, includes four bar magnets 30 interconnected at corners by non-magnetic elements 32, such as triangular wooden blocks as

more clearly seen in FIG. 3, to form a rectangular enclosure in surrounding relation to the track 12. Pole faces 34 and 36 between which a stationary magentic field extends are formed on the bar magnets substantially aligned with parallel spaced planes in perpendicular intersecting relation to the path line 16. The pole face 34 of one polarity (north) is effective through its magnetic field to magnetically interact with the magnetic field of the armature magnet 22 causing unidirectional propulsion of the armature 10 as actually observed during tests. Such magnetic interaction is obviously influenced by the pole face 36 of opposite polarity (south) abutting and fixed to an annular or circular ring magnet 38 magnets 30. The interconnected and 38 may be held in assembled relation by an outer skin or sheathing 40 as shown in FIG. 3.

The ring magnet 38 has a radially inner pole surface 42 of the same polarity (north) as that of the pole faces 34 to interact with the other pole faces 36 as aforementioned, to the exclusion of the radially outer pole surface 44. The obvious effect of said arrangement is to exert a net magnetic force on the armature magnet 22 causing the observed continuous, unidirectional propulsion thereof through the gate assemblies 28. Such assemblies 28 are spaced apart distance dependent on the magnetic field intensity or strength of the permanent magnets 30 and 38 which dictate the effective axial extent of the aforementioned magnetic fields associated with the assemblies 28 and the armature magnet 22.

FIGS. 4-7 illustrate another embodiment of the invention utilizing the same type of movable armature 10 guided along a predetermined path by a frame mounted track 12 extending through a flux zone 46 established by another type of permanent magnet stator arrangement, generally referred to by reference numeral 48. The stator 48 includes a pair of permanent magnet assemblies 50 extending in parallel spaced relation to each other on opposite sides of the armature path established by the track 12. Each assembly 50 is a mirror image of the other so as to expose continuous confronting pole surfaces formed by a magnetic layer material 52 such as Neodynium, mounted on interconnected ceramic bodies 54. The confronting pole surfaces of the magnetic layers 52 are of like polarity (north), opposite to the polarity of the pole surface of magnetic layer sections 56 and 58 made of Samarium Cobalt, for example, and carried on the ceramic bodies 54. The bodies 54 have transversely extending flange portions 60 at the abutting ends so as to mount the layer sections sections 58 laterally outwardly of layer sections 56 as more clearly seen in FIGS. 4 and 6 to thereby vary the magnetic field intensity along the guided armature path within the limited flux zone 46 in which the magnetic fields of the stator assembly 48 interact with the magnetic field of bar magnet 22.

The curved armature magnet 22 is orientated within the flux zone 46 between the confronting pole surfaces on 52 as depicted in FIG. 7, with the pole faces 18 and 20 converging toward the track 12 as previously described in connection with FIGS. 1-3. However, it was found that maximum propelling thrust is produced by optimum location of the path line 16 through the pole faces 18 and 20 a distance 62 closer to the upper edge of surface layer 52 than the lower edge on the frame support 14.

FIGS. 8 and 9 illustrate yet another embodiment of the invention involving the same type of permanent magnet stator arrangement 50 as described with respect to FIGS. 4-7. a modified form of armature 10' is featured in FIGS. 8 and 9, including two curved armature magnets 64 that are mirror images of each other with respect to an intermediate abutting portion 66. The magnets 64

are interconnected at the abutting portion 66 in alignment with a plane containing the path line 16 centrally between the confronting pole surfaces on 52. The end pole faces 68 and 70 for each magnet 64, are aligned with a plane in parallel spaced relation between the path line 16 and the pole surface on 52. With the number of pole faces thereby doubled for the armature, a higher and more efficient propelling thrust may be achieved.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be restorted to, falling within the scope of the invention.

US Patent # 5,402,021

Magnetic Propulsion System

Howard R. Johnson

(March 28, 1995)

Abstract --- A magnetic propulsion system including a plurality of specifically arranged permanent magnets and a magnetic vehicle propelled thereby along a path defined by the permanent magnets. The magnetic vehicle which is to be propelled includes a rigidly attached armature comprising several curved magnets. The propulsion system further includes two parallel walls of permanent magnets arranged so as to define the lateral sides of a vehicle path. Preferably, the walls are identical to one another except that the polarities of the magnets which define one wall are opposite from the polarities of the corresponding magnets in the opposite wall. A first wall, for example, includes a series of generally rectangular magnets, each magnet arranged with a North-to-South axis pointing longitudinally down the wall in the intended direction of vehicle travel. Each of the rectangular magnets is separated from the next successive rectangular magnet by a thinner magnet, which thinner magnet is arranged with its North-to-South axis pointing laterally toward the opposite wall and therefore perpendicular with respect to the North-to-South axis of the rectangular magnets. The opposite (or second) wall includes the same general arrangement of magnets, except that the North-to-South axis for each of the generally rectangular magnets is in a direction opposite from the direction of vehicle travel and the North-to-South axis of the thinner magnets points away from the first wall. In addition, the propulsion system includes several spin accelerators.

Inventors: Johnson; Howard R. (1440 Harding Rd., Blacksburg, VA 24060)
Appl. No.: 064930 ~ Filed: May 24, 1993

Current U.S. Class: 310/12; 198/619; 310/152
Intern'l Class: B65G 035/06; H02K 041/00
Field of Search: 310/12,152,46 198/619,805

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4,151,431 ~ Aug., 1979 ~ Johnson (Cl. 310/12).
4,215,330 ~ Jun., 1980 ~ Hartman (335/306).
4,877,983 ~ Oct., 1989 ~ Johnson (310/12).

Other References:
Advances in Permanent Magnetism, pp. 44-57 date unknown.
Scientific American, Jan. 1989, pp. 90-97.
Introduction to Magnetic Materials, pp. 129-135 date unknown.
Applications of Magnetism, pp. 42-47 date unknown.

Description

FIELD OF THE INVENTION

The present invention relates to a magnetic propulsion system including a plurality of specifically arranged permanent magnets and a magnetic vehicle propelled thereby along a path defined by the permanent magnets.

BACKGROUND OF THE INVENTION

The generation of unidirectional propelling forces by permanent magnets is already known and recognized in U.S. Pat. Nos. 4,151,431 and 4,877,983 to Johnson, and U.S. Pat. No. 4,215,330 to Hartmen, by way of example. According to applicant's first patent (U.S. Pat. No. 4,151,431), such forces are generated by magnetic interaction between a curved magnet bar of an armature guided for movement along a circular path and an arrangement of spaced stator magnets having pole faces of one polarity facing the armature on one side thereof parallel to the path of movement.

According to applicant's second patent (U.S. Pat. No. 4,877,983), the armature magnet is mounted on a vehicle and guided along a path through a magnetic flux zone limited on opposite sides of the path by an arrangement of magnetic pole surfaces of one polarity on stator magnets. According to one embodiment of the second patent, the flux zone is formed by spaced gate assemblies of magnets having exposed pole faces of one polarity in a plane perpendicular to the armature path from which a magnetic field extends to the opposite pole faces and a ring magnet fixed to such opposite pole faces of the other polarity, with a radially inner pole surface of the same polarity producing a magnetic field perpendicular to the first mentioned field to their opposite radially outer pole surfaces. Several other embodiments are illustrated including variations in the armature structure and in the stator structure; however, all of the embodiments teach use of an annular stator assembly.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide an improved magnetic propulsion system having a plurality of permanent magnets and a magnetic vehicle propelled thereby along a path defined by the permanent magnets, wherein the permanent magnets need not encircle the path of the magnetic vehicle.

In order to achieve this and other objects, the present invention comprises two parallel walls of permanent magnets arranged so as to define the lateral sides of a vehicle path. The walls are identical to one another except that the polarities of the magnets which define one wall are opposite from the polarities of the corresponding magnets in the opposite wall.

A first wall, for example, includes a series of generally rectangular magnets, each magnet arranged with a North-to-South axis pointing longitudinally down the wall in the intended direction of vehicle travel. Each of the rectangular magnets is separated from the next successive rectangular magnet by a thinner magnet, which thinner magnet is arranged with its North-to-South axis pointing laterally toward the opposite wall and therefore perpendicular with respect to the North-to-South axis of the rectangular magnets.

The pole-to-pole length of each thinner magnet is preferably no more than half the width of the generally rectangular magnets. Accordingly, a gap on the inside surface of the wall is defined by the presence of each thinner magnet.

The opposite (or second) wall includes the same general arrangement of magnets, except that the North-to-South axis for each of the generally rectangular magnets is in a direction opposite from the direction of vehicle travel and the North-to-South axis of the thinner magnets points away from the first wall.

In addition, the propulsion system of the present invention includes several spin accelerators for crowding the magnetic fields at predetermined positions along the length of the walls. This crowding of the magnetic fields serves to intensify the fields and causes the vehicle's armature to be accelerated faster than would otherwise be the case without the spin accelerators.

The spin accelerators project laterally outward from each of the walls at predetermined positions along the longitudinal length of each wall. Each spin accelerator comprises a generally rectangular permanent magnet which is preferably identical to that of the first and second walls. Each spin accelerator further includes a shorter magnet having a smaller pole-to-pole length than that of the generally rectangular magnet and a wedge separating the generally rectangular magnet of the spin accelerator from the shorter magnet.

The orientation of the generally rectangular magnet in the spin accelerator is determined by which pole of the wall's thinner magnet is facing outwardly. The rectangular magnet's orientation is such that face-to-face contact is established between opposite poles of the generally rectangular magnet in the spin accelerator and the thinner magnet in the wall. Accordingly, the North-to-South axis of the generally rectangular magnet in the spin accelerator points in the same direction as the North-to-South axis of the thinner magnet in the wall. The shorter magnet in the spin accelerator is likewise arranged with its North-to-South axis pointing in the same general direction as that of the thinner magnet in the wall; but here, an acute angular tilt away from the

North-to-South axis of the thinner magnet is established by the wedge. In particular, the angle of the wedge determines the acute angle which exists between the North-to-South axis of the shorter magnet in the spin accelerator and the North-to-South axis of the thinner magnet in the wall.

The magnetic vehicle which is to be propelled by the instant propulsion system includes a rigidly attached armature comprising several curved magnets. Each curved magnet is arranged on the vehicle such that its North-to-South axis is parallel with respect to that of the other curved magnets. In particular, the North-to-South axes of all the curved magnets point in the same direction as the North-to-South axes of the thinner magnets in each wall. The vehicle itself is preferably a wheeled vehicle mounted on a track; however, it is understood that other vehicle structures will suffice so long as the vehicle is maintained between the walls of the propulsion system.

In operation, the magnetic fields created by the two walls exert a propelling force on the armature of the vehicle in the desired direction of travel. Since the armature of the vehicle is rigidly attached to the vehicle, the vehicle itself begins to accelerate and is hence set in motion by the propulsion system.

Preferably, the curved magnets of the vehicle armature are "Alnico 8" magnets tipped with neodymium magnets. The magnets which constitute the walls and spin accelerators are preferably made of neodymium and ceramic material, except for the thinner magnets. The thinner magnets are preferably made of rubber or plastic, and each can comprise a plurality of magnetic rubber or plastic layers.

Although the present invention has been described with regard to generally rectangular magnets, it is understood that other permanent magnet shapes will suffice, including but not limited to generally cylindrical shapes.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a schematic plan view of a magnetic propulsion system in accordance with a preferred embodiment of the present invention.

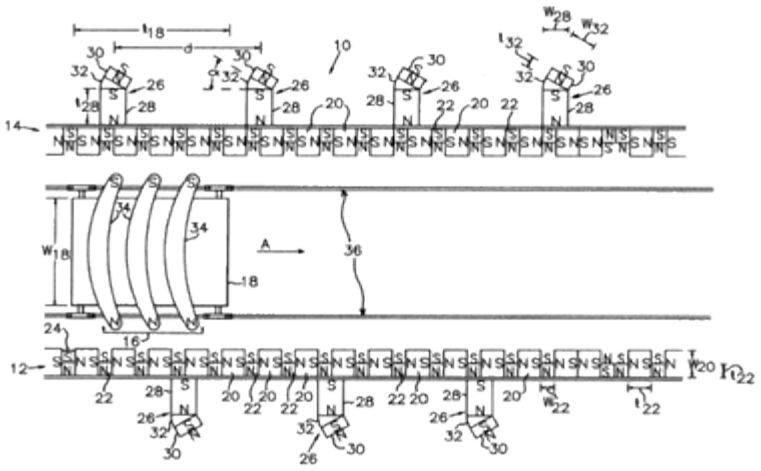

FIG. 1

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

With reference to FIG. 1, a preferred embodiment of the inventive magnetic propulsion system and vehicle propelled thereby will now be described.

FIG. 1 schematically illustrates a propulsion system 10 comprising two parallel magnetic walls 12,14 which are stationary, and an armature 16 rigidly attached to a vehicle 18. The two parallel walls 12,14 are formed from several permanent magnets arranged so as to define the lateral sides of a vehicle path. The desired direction of vehicle travel is indicated by an arrow A in FIG. 1. The two walls 12,14 are identical to one another except that the polarities of the magnets which define one wall 12 are opposite from the polarities of the corresponding magnets in the opposite wall 14. A first wall 12, for example, includes a series of generally rectangular magnets 20, each magnet arranged with a North-to-South axis pointing longitudinally down the wall in the intended direction of vehicle travel (indicated by arrow A). Each of the magnets 20 preferably comprises a ceramic magnet with a neodymium north pole. In addition, each of the generally rectangular magnets 20 is separated from the next successive rectangular magnet 20 by a thinner magnet 22. The thinner magnets 22 are arranged with their North-to-South axes pointing laterally toward the opposite wall 14 and therefore perpendicular with respect to the North-to-South axis of the rectangular magnets 20. Each thinner magnet 22 is preferably made from rubber or plastic permanently magnetic material. Also, the pole-to-pole length of each thinner magnet 22 is preferably no more than half the width of the generally rectangular magnets 20. Consequently, a gap 24 on the inside surface of the wall 12 is defined by the presence of each thinner magnet 22.

The opposite (or second) wall 14 includes the same general arrangement of magnets 20,22, except that the North-to-South axis for each of the generally rectangular magnets 20 points in a direction opposite from the direction of vehicle travel, while the North-to-South axes of the thinner magnets 22 point away from the first wall 12.

By arranging the thinner magnets 22 between the generally rectangular magnets 20 in the foregoing manner, there is a pole shading effect on the magnets 20 of the walls 12,14.

In addition, the propulsion system 10 of the preferred embodiment includes several spin accelerators 26 for crowding the magnetic fields at predetermined positions along the length of the walls 12,14. This crowding of the magnetic fields serves to intensify the fields and causes the vehicle's armature to be accelerated faster than would otherwise be the case without the spin accelerators.

The spin accelerators 26 project laterally outward from each of the walls 12,14 at predetermined positions along the longitudinal length of each wall 12,14. According to the preferred embodiment, the spin accelerators 26 are positioned along the walls 12,14 at every other thinner magnet 22 (as is shown in the middle of FIG. 1). Each spin accelerator 26 comprises a generally rectangular permanent magnet 28 which is preferably identical or very similar to that of the first and second walls 12,14. Each spin accelerator 26 further includes a shorter magnet 30 having a smaller pole-to-pole length than that of the generally rectangular magnet 28 and a wedge 32 separating the generally rectangular magnet 28 of the spin accelerator 26 from the shorter magnet 30. The orientation of the generally rectangular magnet 28 in the spin accelerator 26 is determined by which pole of the wall's thinner magnet 22 is facing outwardly. The rectangular magnet's orientation is such that face-to-face contact is established between opposite poles of the generally rectangular magnet 28 in the spin accelerator 26 and the thinner magnet 22 in the wall 12,14. Accordingly, the North-to-South axis of the generally rectangular magnet 28 in the spin accelerator 26 points in the same direction as the North-to-South axis of the thinner magnet 22 in the wall 12,14. The shorter magnet 30 in the spin accelerator 26 is likewise arranged with its North-to-South axis pointing in the same general direction as that of the thinner magnet 22 in the wall 12,14; but here, an acute angular tilt away from the North-to-South axis of the thinner magnet 22 is established by the wedge 32. In particular, the angle .alpha. of the wedge determines the acute angle which exists between the North-to-South axis of the shorter magnet 30 and the North-to-South axis of the thinner magnet 22 in the wall 12,14. The shorter magnet 30 preferably consists of neodymium.

The magnetic vehicle 18 which is to be propelled by the instant propulsion system 10 includes a rigidly attached armature 16 comprising several curved magnets 34. Each curved magnet 34 is arranged on the vehicle 18 such that its North-to-South axis is parallel with respect to that of the other curved magnets 34. In particular, the North-to-South axes of all the curved magnets 34 point in the same direction as the North-to-South axes of the thinner magnets 22 in each wall 12,14. The vehicle 18 itself, according to the preferred embodiment, is a wheeled vehicle mounted on a track 36. It is understood, however, that other vehicle structures will suffice so long as the vehicle is maintained between the walls 12,14 of the propulsion system 10.

In operation, when the vehicle 18 is positioned as is shown in FIG. 1, the magnetic fields created by the two walls 12,14 exert a propelling force on the armature 16 of the vehicle 18 in the desired direction of travel (arrow A). Since the armature 16 is rigidly attached to the vehicle 18, the vehicle 18 itself begins to accelerate and hence is set in motion by the propulsion system 10.

Furthermore, since the spin accelerators 26 serve to crowd and thereby intensify the magnetic fields at predetermined positions along the walls 12,14, the acceleration of the vehicle is enhanced as the vehicle passes these predetermined positions.

The spin accelerators 26 can be reversed in order to lessen their effectiveness at crowding the magnetic fields. Reversing of the spin accelerators 26 can be accomplished by rotating the spin accelerators 26 so that the shorter magnets 30 tilt away from the intended direction of vehicle travel, rather than in the direction of travel as is the case for the illustrated embodiment.

Preferably, the curved magnets 34 of the vehicle armature 16 are "Alnico 8" magnets tipped with neodymium magnets, while the wedges 32 comprise wood or similar material and an angle .alpha. of 45 to 90 degrees.

The width w.sub.20, height, and pole-to-pole length 1.sub.20 of the generally rectangular magnets 20 in each wall 12,13 are 0.75 inches to 1.25 inches, 3.75 to 4.25 inches, and 1.25 inches to 1.75 inches, respectively. The width w.sub.22, height, and pole-to-pole length 1.sub.22 of the thinner magnets 22 in the walls 12,14 are 1 inch to 1.5 inches, 3.75 inches to 4.25 inches, and no more than one half the width w.sub.20 of the generally rectangular magnets, respectively. In the spin accelerators 26, the width w.sub.28, height, and pole-to-pole length 1.sub.28 of the generally rectangular magnets 28 are 1.125 to 1.625 inches, 3.75 to 4.25 inches, and 0.875 inches to 1.375 inches, respectively, while the width w.sub.32, height, and pole-to-pole length 1.sub.32 of the shorter magnets 30 are 0.75 inch to 1.25 inches, 3.75 inches to 4.25 inches, and 0.125 inch to 0.375 inch, respectively.

Preferably, the distance separating the walls 12,14, is such that each wall 12,14 is 0.5 inch to 1.25 inches away from the tips of the armature magnets 34, both walls 12,14 being equidistant from the tips of the armature 16. Also, the curved magnets 34 of the armature 16 are preferably 0.375 inch to 0.625 inch apart from one another.

Testing of the foregoing prototype propulsion system resulted in the vehicle moving 2 feet in one second.

Although the present invention has been described with reference to a preferred embodiment, it is understood that various modifications to this embodiment will become subsequently apparent to those having ordinary skill in the art. In this regard, the scope of the invention is limited only by the claims appended hereto, and not by the illustrated embodiment.

Tom Bearden Comments
(Cribbed from www.greaterthings.com)

From: "Karl" <krlbrgmnn@mailandnews.com>
To: "Sterling D. Allan, PerenTech.com" <sterlingda@perentech.com>
Sent: Thursday, December 19, 2002 2:01 PM
Subject: Truth about Howard Johnson and his motor

Sterling,

Just a quick note to let you know I spoke to Tom Bearden today and, regarding the statement on your webpage by your "anonymous source" who said "Howard Johnson never was able to get the rotary version to work. He was only able to get the linear version working, and there were some questions about its viability.", Tom said such a person doesn't know what they are talking about. I'd say Tom is in the best position to know, since he and Howard have been friends for decades and Howard has personally brought a functional, rotary PMM to Tom's house, and they've played with it for hours. Next to Howard himself, I'd consider Tom to be the best resource on the subject of HJ's PMM.

He also said that Howard is still working on getting another functioning unit constructed (he's had numerous setbacks over the years after his working unit was vandalized by thieves that broke into Howard's shop and stole only the magnets off that model, leaving many $K worth of other material nearby untouched). Howard is still plugging away every day, at over 70 years old, but his wife's health problems are keeping him busy. However, he has gotten hooked up with a respectable, honest businessman who is financing him and Howard also now has some younger help to do the grunt work that is becoming tougher for him. All in all, Tom hopes to see some real progress being made for Howard in the next year or so.

Tom mentioned that there are a few critical things that anyone who wants to successfully build a working HJ PMM needs to know, some of which are probably obvious to the more experienced builders:

1) The most critical element is the precise machining of the magnets. Joe Q. Public, with his diamond saw, cutting his own magnets by hand has little chance of succeeding in shaping the magnets to the aerospace-critical specs that are the minimum necessary, much less duplicating that feat several times for each necessary part.

2) Alignment of the parts is highly important too. One slight misalignment and the motor will not run continuously.

3) All magnets aren't the same. This application requires expensive, extremely high quality magnets. Howard, in order to get them cheaper, was buying them in $50K lots from China, where high quality and a lower price can be had.

I also spoke with a gentleman named Gary Hanson who had been in touch with Howard years ago when Gary was trying to build Howard's motor. Howard told him, as I think most researchers on this know now, that the motor *can* be build directly from the patent but that there needs to be 5 or 6 armtures and not just the one that is shown as an illustration in the patent. Just want to make sure any newbies understand this.

I hope some of this has helped clear up any misunderstandings for those of us interested in building a functional HJ PMM. My opinion is that, if you want to do it right, go to the horse's mouth (Howard) or else as close as you can possibly get (Tom). Hopefully, doing so will enable us to make this motor a reality.

Regards, Karl

Tom Bearden: ***Chasing the Wild Dragon*** **[**Excerpts from www.cheniere.org]

Howard Johnson is also a respected colleague, whom I very much admire. (See Figure 23). Howard has continued to work quietly and patiently upon his patented permanent magnet motor, [note 31] including patenting various magnetic gates, etc. that are necessary to make such a motor work in a rotary configuration. [note 32] Howard employs a two-particle theory of magnetism; i.e., each magnetic flux line is envisioned as having a particle traveling from the north pole to the south pole, and also a particle traveling from the south pole to the north pole. The particles are spinning; the forward-time particle spins in one direction, and the antiparticle spins in the other direction. Howard then slightly separates the two particle flows. [note 33] In other words, Johnson splits the flux lines themselves, into two different pieces. When so separated, the component lines are now curls, so their paths curve. The paths of the two "curl particles" are different; one curls in one direction and the other curls in the opposite direction. Further, a predominance of one form of curl particle gives a "time-forward" aspect, while a predominance of the other form of curl particle gives a "time-reversed" aspect. Johnson is thus able to employ a deeper kind of magnetism than the textbooks presently contain. He demonstrates that a "spin-altered" magnetic assembly exhibiting (to a compass or other such detector) a north polarity can attract another unaltered magnetic assembly exhibiting a north polarity. In short, he can make a north pole attract a north pole. We will give you further insight into Johnson's two-particle theory in a future article. [note 34] We will also explain how and why the physicists missed that antiparticle in the magnetic field's flux lines, and thereby failed to advance the theory of magnetism to a deeper level. Make no mistake, one day when the new theory is done, Johnson may well be awarded a Nobel Prize for his epochal discovery of a deeper structure of magnetism.

Footnotes:

[32] I personally saw and closely examined one demonstration rotary Johnson permanent magnet motor some years ago, and toyed with it for about one hour. It would definitely self- rotate as long as you wished to permit it to turn. It was not a powerful device at all, but just a small laboratory "proof of principle" prototype. It had cost Johnson an enormous amount of time, labor, and optimization to get the critical adjustment required of his two magnet assemblies. But the device had no power source other than the permanent magnet assemblies themselves. Johnson's nonlinear rotor and stator magnets interacted with each other in a manner to break local symmetry. So his machine was an open system and therefore a permissible overunity device; it was not a perpetuum mobile.

[33] As I have pointed out repeatedly in the past, photons also carry time, not just energy. We have previously shown the process and the photon interaction mechanism that creates the flow of time itself; we will discuss this mechanism in the future. So when Johnson separates the particles and antiparticles, not only does he partially separate them according to spin, but he also alters the local character of time flow during which the resulting magnetic field forces must appear. In other words, he accomplishes a partial separation of time-forward and time- reversed polar interactions. A south pole is just a time- reversed magnetic north pole, in the first place! So a

north pole of a bar magnet that is slightly time reversed on one side will partially act on that side just like a south pole. On the other side it will continue to act like a normal north pole. By partially time-reversing (phase conjugating) one side of the north magnetic pole piece, Johnson makes that side look and act like a south pole. that way Howard is able to create two north poles, one on a stator and the other on a rotor, and time-reverse part of one face of the stator's north magnetic pole-piece. Therefore when the proper sides of the stator and rotor north poles are facing, they attract each other, contrary to the conventional textbook. The two poles then repel each other normally as soon as the north rotor poles passes the north stator pole. Hence Johnson can make a surrounding north pole stator assembly "draw in" an approaching north pole rotor assembly, and then kick it on out the other side, because he has broken the local magnetic symmetry. In short, Johnson's magnetic gate can provide a legitimate component of unidirectional magnetic thrust, which means that he can indeed make a rotary permanent motor. Simply put, this "partially separating the spin particles," and thereby partially phase conjugating one face of a magnet, is what Johnson calls a "gate," and this is the patented secret by which his magnet assemblies can be made self-powering. The entire process is still very meticulous, and assembly and adjustments are extremely critical. With Johnson's blessings we hope to shed more light on this subject in coming articles.

[34] For a basic article on rotary permanent magnet motors, see T.E. Bearden, "On Rotary Permanent Magnet Motors and 'Free' Energy," *Raum & Zeit*, 1(3): 43-53 (Aug.-Sep. 1989).

Oleg KALININ, *et al.*

Munich Jar

New Energy Technologies **(Sept-oct. 2001), p. 119-120**

Hydrogen-Helium Energy on the Base of Laminated Silicates and Tectosilicates

by

Dr O. M. Kalinin, Dr Hartmut Mueller, K.S. Surina

St Petersburg State Univ. Res. Inst. of Cosmic Energy

In October 2000 an opening of Research Institute on Cosmic Energy (RICE) took palce in Munich. The opening of a branch institute in St petersburg is planned to be done in a year. Official materials were published in the magazine *Raum und Zeit* (*Space and Time*) # 109 and

#110 (2001), http://www.raum-und-zeit.com . A gravito-electrical transformer of cosmic energy was shown in the presentation of the Institute.

Transformation of energy is a central notion in universal (analytical) electrodynamics by Maxwell-Zubov. Acad. Vladimir I. Zubov studied the unification of electromagnetic and gravitational interactions. Eighler's rotatory mechanics with three Eighler's angles (precession, nutation and proper rotation) is opposed to Newtonian translational mechanics. Proper rotation is usually called rotation, twisting or torsion.

In 1995 Dr Oleg M. Kalinin successfully defended his doctoral thesis on the topic "Mathematical biology and quantification". But higher Certifying Commission of Russia organized a blockage of this thesis. The main opponent was the biophysical cathedra of Moscow State university. Research Institute of Cosmic Energy was established for the development of this theme. The main report on the topic of the theme lasted more than one hour. Director of RICE Dr Hartmut Mueller demonstrated a gravitational electric unit made of minerals of serpentine (negative potential "minus", laminated silicate) and quartz (positive potential "plus", tectosilicate). This so-called Munich jar is a real perpetual energy source: according to our calculation a small 3 watt lamp will work about 3 x 10^6 years. In this energy source the transformational process of hydrogen and helium takes place and the catalyst of this process is silicon, 28/14 Si.

The informational equations of 1972 lie in the base of this theory (Kalinin, 1972, Problems of Cybernetics, part 25, pp 107-117). In 1982 Dr Mueller found general solutions of informational equations. it was the constant of strong interactions, reverse constant of electromagnetic interactions and reverse constant of gravitational interactions. The Munich jar is a real example of electromagnetic and gravitational unification.

Gravitation and electric source of energy (Munich jar) also can work as a means of telecommunication. The Munich jar transforms the energy of gravity waves to electric energy. A reverse process is possible, i.e., the modulation of gravity waves and transfer of information by means of them. This communication already works between Munich and Erfurt. It is planned to make communications between Munich and St Petersburg in October 2001.

Miniature Munich jars have the size of 6 x 8 mm are applied in a new medical device. which protects a man from the negative effect of low-frequency electromagnetic fields of technical origin in the band from 1-100 Hz.

Another miniature Munich jar having the size of 12 x 16 mm also are applied in a new medical device, which makes the healing of wounds 2-3 times guicker.

More information can be found at www.raum-und-zeit.com, in the magazine issue #109/2001, page 70, 66-73 and 105/2000, page 5-10.

Some Notes from Faraday Lab Ltd. ---

We have been acquainted with Acad. Zubov from 1989 up to his death. besides the interesting discussions (particularly on the topic of inertialess non-reactive motion) I should mention his kind willingness to give organizational support for new ideas in science.

Concerning the above-mentioned Munich jar, I think this effect is a demosntration of electro-gravitational phenomena described by T.T. Brown in his patents of 1927-1965. Certain materials including complex silicates, laminates and clays and certain rare earth elements decrease its weight due to tribo-excitation. "The result is not only real loss of weight, but such materials suffer a retardation in gravitational acceleration (value "g"), writes T.T. Brown in his article "Method of Producing Gravitationally Anomalous Materials". The method of excitation is a mechanical friction only (it is called "tribo-excitation").

The Munich jar, about which we wrote above, involves special materials mentioned in Brown's articles to the process of electro-gravitational energy exchange.

We are interested in the development of this research topic, if there will be adequate investments from the customer. Commercial application of this technology is possible in telecommunication, energetics, aerospace and medicine.

Alexander V. Frolov

Alexander V. Frolov and Dr. Oleg M. Kalinin St.Petersburg, August 2001

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http://v3.espacenet.com/publicationDetails/biblio?KC=A2&date=20020502&NR=1201610A2&DB=EPODOC&locale=en_EP&CC=EP&FT=D

EP1201610
Process and apparatus for thermally joining articles of silicate material
Hartmut MUELLER

Also published as: EP1201610 (A3) // DE10053402 (A1) // DE10053402

Process for thermally joining components made from silicate materials and silicate composite materials comprises heating the components (B) to be joined in a region around their joining site (S) to a pre-heating temperature below its softening point; and adding additional heat energy to the components at the joining site to heat the components to a joining temperature which lies at or above the temperature of each softening point. An Independent claim is also included for a device for thermally joining components made from silicate materials and silicate composite materials comprising a first heater for heating the components (B) to be joined in a region around their joining site (S) to a pre-heating temperature below its softening point; and a second heater for adding additional heat energy to the components at the joining site to heat the components to a joining temperature which lies at or above the temperature of each softening point. Preferred Features: Additional energy is applied using a laser beam (L) which moves back and forth along the joining site.

Philipp M. KANAREV

Water Plasma Electrolysis

Contact

P. M. Kanarev: Water is the Main Power Carrier of Future Engineering
P. M. Kanarev: Expert Resolution on Scientific Investigation Results
Links to Articles & Books Online at Innoplaza.net
Instructions for Building Kanarev Electrolysis Cell
Jeanne Manning: Russian Discoveries (excerpt)
P. M. Kanarev: Low Current Electrolysis of Water
P. M. Kanarev: Low Current Process of Water Electrolysis
Patents by Kanarev

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http://guns.connect.fi/innoplaza/energy/story/Kanarev/index.html

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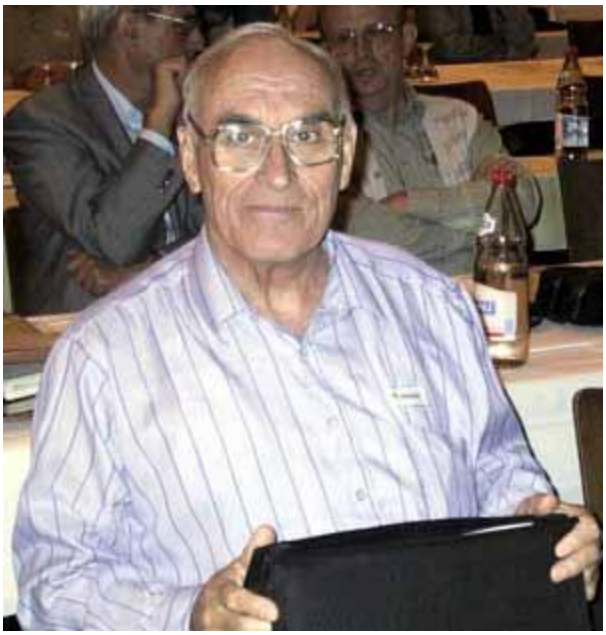

Prof. Philipp M. Kanarev

Kanarev Water Plasma Electrolysis Cell in Operation

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http://guns.connect.fi/innoplaza/energy/story/Kanarev/index.html

WATER IS THE MAIN POWER CARRIER OF FUTURE POWER ENGINEERING

Ph. M. Kanarev

ABSTRACT ---

The problems of power engineering are well known. The power carriers, which are used nowadays, are not only exhaustible, but they cause a considerable damage to environment. Nearly 40 years ago it was announced that controlled thermonuclear fusion could be the future inexhaustible energy source. More than 25 billion dollars have been spent for the investigation of this source, but there is no positive result. This state can be explained by a considerable lag of theoretical investigations from the possibilities of industry to implement any installation in order to check an intuitive idea being formulated. As a result, the main attention has been paid to an experiment, not to a theory.

As there was no acceptable theoretical description of the planned process of thermonuclear fusion control, a positive result could be obtained only by chance. Theoretical prognostication of this result was impossible due to the absence of any notion concerning the models: the electron, the proton, the atom of hydrogen and the ions of chemical elements, which form plasma. Orthodox physics did not even set itself such task.

In the meantime theoretical physics and theoretical chemistry were at a standstill. They were developed by those who managed to overcome a stereotype of the existing theoretical notions. As a result, the models of the photon, the electron, the atom of hydrogen, the atoms of the ions and the molecules of other chemical elements took place. The analysis of them of the behavior demonstrated the impossibility to control plasma in a current carrying space, which is the main technological element of the well known installations "Takomak". If it was known earlier, the expenses for the above-mentioned investigations could be reduced at least by an order of magnitude.

Twelve years ago Fleischmann and Pons, the American electrochemists, obtained additional energy during electrolysis of heavy water. They announced at once that cold nuclear fusion is the source of this energy. Hundreds of experiments were carried out in various countries in order to check this fact. The positive result was registered, but its reproducibility proved to be low. The reason of appearance of additional energy remained unclear.

In 1995, we began our investigations of the water electrolysis process in order to obtain additional energy. It has been determined that there are such modes of plasma electrolysis of water when up to 100% of additional thermal energy takes place, but a thousandfold increase of energy, which was announced by the Americans, was not confirmed. The calculations have shown that an increase of thermal energy by 100% with the unstable reproducibility of such a result has no prospects for industrial implementation. At least 300% increase of thermal energy is necessary, but such result cannot be obtained still.

But if we take into consideration energy of hydrogen and oxygen, which are released from water together with additional thermal energy, it will be possible to get more than 300% of additional energy.

Modern industrial installations require 4 kWh for production of 1 cubic meter of hydrogen from water. When this hydrogen is burnt, 3.6 kWh of energy is released. If the energy expenses for

production of hydrogen from water are reduced by twofold or threefold, it becomes a competitive energy carrier. If it is possible to reduce these expenses of hydrogen tenfold, it will become the cheapest energy carrier. In this case, coal, oil and natural gas fail to compete with it.

Our investigations have shown that there are some plasma electrolytic devices and modes of their operation, which reduce energy expenses for obtaining one cubic meter of hydrogen up to 0.40 kWh. In this case, more than 1000% of additional energy is obtained. A laboratory device with such indices was made one year ago.

Modern fuel elements use potential possibilities of hydrogen by 0.6%. There is every reason to believe that the fuel element will improve this index at least by an order of magnitude if it operates together with the plasma electrolytic reactor. There are great reserves in the discovered direction of the energy problem solution.

The transition from a laboratory installation to the industrial one requires additional investigations with the use of rather expensive spectrometers, gas analyzers, electronic sets for simultaneous registration of more than 10 induces of the plasma electrolytic process. As hydrogen is an explosive gas, it is impossible to ignore the investigation stage for making the laboratory installation the industrial one. During the scale operation, dangerous radiations can take place, which accompany the transmutation process of the chemical element nuclei.

Five patents have been received for the investigation results; three positive decisions concerning the issue of the patents and three claims are in the process of consideration. Three editions of the book "Water as a New Source of Energy" are available with the detailed theoretical description of plasma electrolysis of water and the quantitative calculations of the experimental results.

The author of these elaborations was invited to deliver a lecture concerning this problem at the European congress on "New Hydrogen Technologies and Space Drives", which took place on June 23-24 in Weinfelden near Zürich.

As the author has kept walking along the corridors of the Russian power without success for five years in order to get financing, the last hope remains – to find a foreign investor. The author is busy with this problem as it is clear that a delay in financing is equal to a loss of priority in this topical field of investigations, which solves two global problems of the mankind: the energy problem and the environmental problem.

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http://guns.connect.fi/innoplaza/energy/story/Kanarev/index.html

EXPERT RESOLUTION ON SCIENTIFIC INVESTIGATION RESULTS of Professor Philipp M. Kanarev, head of the Chair of Theoretical Mechanics of the Kuban State Agrarian University

1. ESSENCE OF RESULTS OF THEORETICAL INVESTIGATIONS

The results of theoretical investigations of Professor Ph.M. Kanarev are based on a new axiomatics of exact sciences formulated and presented by him. Due to this fact, some of his scientific results do not match a number of acknowledged modern physical and chemical theories, with the special theory of relativity by A. Einstein and the theory of orbital movement of the electrons in the atoms, in particular. It is natural, because the above-mentioned theories have been worked out without taking into consideration the actual existing fact of space - matter - time unity, which is axiomatic, and due to this fact it should be taken into consideration when any mathematical theory is worked out. But it has not taken place, because prior to Ph.M. Kanarev nobody has given an axiomatic significance to the actually existing basic fact of space - matter - time unity.

Minkovsky was the first to pay attention to space - time unity. But he neglected the fact that not only space and time are inseparable, but matter is inseparable with space and time. Ph.M. Kanarev paid attention to this fact and formulated an axiom of space - matter - time unity. When he did it, his axiom began to play the role of a criterion when checking a bond of mathematical models of various theories with reality at once.

The analysis of Lorentz's transformations within the framework of the axiom of space - matter - time unity carried out by the author has demonstrated groundlessness of the universally recognized interpretation of these transformations and lack of the consequences of these transformations, which are a foundation of the special theory of relativity of A. Einstein.

Having formulated the axiom of space - matter - time unity, Ph.M. Kanarev has given interesting patterns of its implementation in the solution of serious problems of modern physics. In particular, it concerns the analysis of correctness of substantiation of Lorentz's transformations as an initial base of the principle of relativity of A. Einstein. He has shown discrepancy of such mathematical transformations to the actual events of the physical nature.

In his scientific works, Ph.M. Kanarev has demonstrated not once that the axiom of space - matter - time unity introduced by him does not allow false notions concerning the essence of the phenomena.

The axiom of space - matter - time unity has allowed the author to find electromagnetic models of the photon and the electron from the existing mathematical models of classical physics. These results are undoubtedly new as far as the depth of validity and connection with the experimental factors are concerned.

A discovery of the law, which governs the permanency of Planck's constant, plays an important role on the scientific investigations of Ph.M. Kanarev. Planck constant has been known for one hundred years, and the reason of the permanency of this constant has been unknown for one hundred years. It is Professor Ph.M. Kanarev who has proved that the law of conservation of angular momentum governs the permanency of Planck constant.

Dimensional method, which is well known in science, has led Ph.M. Kanarev to a conclusion that Max Planck constant, which has dimensionality of angular momentum, is vector quantity. It follows from this that the photon and the electron have a form of rotating rings. Deep analysis of

the existing mathematical models, which describe behaviour of the photon and the electron, has allowed Ph.M. Kanarev to discover their electromagnetic structures and to explain successfully their numerous discrepant features, which have remained incomprehensible from the point of view of modern physical theories.

Thus, the axiom of space - matter - time unity is in the foundation of exact sciences in spite of the author. The scientific community has not paid attention to this fundamental fact, which puts Ph.M. Kanarev among the scientists, who have opened the fundamental law of the nature.

Since the date of the discovery of the fact that the molecules consist of atoms till present time, neither physics, nor chemists have not been in the know of the mechanism of the formation of the atoms and the molecules. The electron is considered to form the orbital movement in the atom, but the way, in which it connects the atoms in the molecules, remains unknown. The thing has become clear after Ph.M. Kanarev has discovered the law of formation of the spectra of the atoms and the ions. It has turned out that there is no orbital component of the energy of the electron in the mathematical model of this law. A conclusion has been made at once that there is no orbital movement of the electron in the atom. And it has turned out here that the law of preservation of angular momentum governs the process of the formation of the atoms and the molecules. One can make a conclusion that the electrons precessing on the nuclei of the atoms connect them into molecules by means of their unlike magnetic poles.

To my mind, on the basis of the concept of Ph.M. Kanarev it is easy to explain the origin, structure and features of Rydberg's atoms and Rydberg's substance, which has been discovered recently by the scientists of the Goetheborg University (Sweden).

The new principle of the connection of the atoms in the molecules together with the law of the formation of the spectra of the atoms and ions have allowed the author to build the models of the atoms and the molecules of the first chemical elements, including the molecules of water, and to analyze in detail the processes of its fusion and dissociation. The contradictions of the modern theory of water electrolysis have been discovered at once, which have been not only eliminated with the help of his new theoretical results, but the author has determined that the fusion of the atoms and the molecules of hydrogen, not the cold nuclear fusion, is the source of additional energy during some modes of water electrolysis.

The new theory of water electrolysis has allowed the author to calculate quantity of heat energy. The results of these theoretical investigations have been confirmed experimentally not only by the author and an independent commission, but by the scientists of USA and Japan.

Ph.M. Kanarev has corrected a mistake made by Schwartzschild in deriving the formula for the calculation of the gravitation radius of the black hole and has worked out the new theory for the calculation of this radius as well as the theory of the contortion of the track of the movement of the photon by a gravitation field of the planets and the stars. This new theory is a significant contribution into astrophysics, and it will cause a revision of the existing astronomical notions.

It is clear that the new theory has formulated many new questions. Here are some of them, which demand great attention and investigation.

Why does the photon loose no energy when moving in the space?

How does a complicated electromagnetic structure of the photon generate constant velocity of its movement?

How is it possible to explain the multi-photon effect and a number of other last discoveries of physics on the basis of the new models of the electron and the photon?

Why is the toroidal structure of the electron stable?

Why do the changes of the energy state of the electron in the atom take place in the form of a jump? Why are they connected with integral numbers?

What fact stipulates discreteness of energy spectrum of the atoms and the ions?

Why do electron ionozation energies of the second electrons and the next electrons beginning from the nuclei of the atoms fail to be equal to their binding energies, which correspond to the first energy levels?

How is it possible to sum up the proof of the increase of mass of the electron during the increase of its velocity for other variants of its interaction with electric field?

How is it possible to substantiate the angular anisotropies of the electrons in the atoms and the atoms in the molecules?

2. NOVELTY OF SCIENTIFIC INVESTIGATIONS

The following significant results of the investigations carried out by Ph.M. Kanarev are the new ones: the axiom of space - matter - time unity; the proof of the vector's properties of Planck constant and the cause of its constant; the law of the formation of the spectra of the atoms and the ions; the electromagnetic models of the photon and the electron; the model of the hydrogen atom, the principles of the formation of the atom and the molecules; the theory of water electrolysis; the deduction of the mathematical model of the law of irradiation of an absolutely black body from the laws of classical physics; the results of the experiments connected with obtaining additional energy during usual and plasma electrolysis of water; technical devices for obtaining heat energy, hydrogen and oxygen during plasma electrolysis of water; mathematical models for the calculation of the gravitational radius of the black hole and the contortion of the track of the movement of the photons by the gravitation fields of the stars and the planets.

3. VALUE FOR SCIENCE AND PRACTICE

A new axiom is new foundation for exact sciences. That's why the axiom of space - matter - time unity will play the same role in science as the Euclidean axioms play now.

The law of the formation of the spectra of the atoms and ions will allow the physicists and chemists to regard the principle of the formation of the atom and the molecules from another

point of view. In spite of the author's will, this law together with vector properties of Planck constant will serve as a foundation for further development of theoretical chemistry.

The method of the construction of the structures of the nuclei, the atoms and the molecules is an original one. It promises the new principles of the investigations of the features of the nature, which are developed on the basis of vector features of Planck constant, not only for the physicists, but the chemists as well.

The new theory of water electrolysis opens its potential possibilities for the generation of additional heat energy, significantly reduces energy expenses for production of hydrogen from water and makes the main source of energy in future power industry.

The new technical devices for heat energy as well as energy containing gases (hydrogen and oxygen) from water will be the prototypes of the future industrial power installations. Five patents have already been obtained for these devices. The use of water as a source of energy will solve many environmental problems in the scale of the planet.

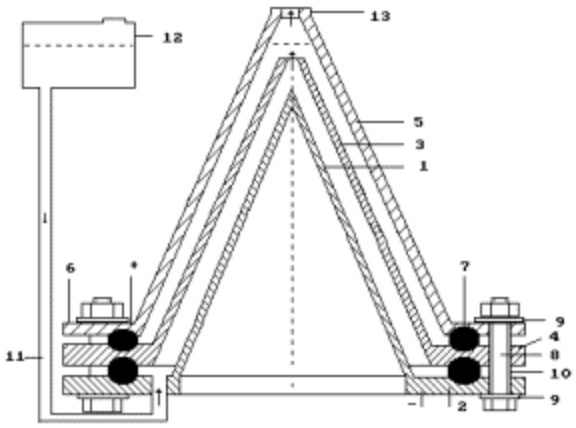
4. PUBLICATIONS

Ph.M. Kanarev has published more than 180 scientific papers, including 15 brochures, three educational guides and 14 books. Some of his scientific papers and books have been published abroad. The American Internet journal *Journal of Theoretics* (http://www.journaloftheoretics.com) has already accepted his five papers on physics to be published in the year of 2002. Now Ph.M. Kanarev writes the book "Classical quantum physics", in which he is going to generalize the results of his theoretical and experimental investigations.

This year Ph.M. Kanarev has got the invitations to the scientific seminars, conferences, symposia and congresses to USA, England, Germany, Switzerland and Russia. In June, 2001, he read lecture "Water as a Source of Energy" in Switzerland at the European congress "New Hydrogen Technologies and Space Drives" (http://Weinfelden.innoplaza.net).

It is from the above-mentioned facts that a number of the new scientific results and ideas of the author will be included into the future guides on physics, mechanics, chemistry, astronomy, philosophy and other sciences and will be developed in the scientific works of other scientists.

Kanarev Electrolysis Cell



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http://guns.connect.fi/innoplaza/energy/story/Kanarev/index.html

Articles by Kanarev
(Free Zipped Word Downloads from Innoplaza.net)

The Beginning of Theoretical Physics --- Experimenters have put a set of 205 questions which demand the answer for understanding of results of experiments before theorists. (94 kb)
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/THEBEGINNINGOFTHEORETICALPHYSICS.doc

Appeal to Physicists and Chemists-Theorists --- "Dear physicists and chemists - theorists, I must apologize that the unity axiom has already sent the large part of your theoretical proceedings and the proceedings of your predecessors to a section of history of science as the ones, which do not reflect a reality. The unity axiom executes its judicial functions, and each theorist should know them." (27 kb)
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Appeal-1.doc

Perpetuum Mobile, Instead of The Machine of Time --- Article in the newspaper "Krasnodar" 5 (457), January 27, 2006, translated into English (38 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Newspaper.doc

The Main Problems of Hydrogen Power Engineering --- "The largest reduction reserve of power consumption for water electrolysis is in the photosynthesis process. Annually during this process, water evolves hundred million cubic metres of hydrogen, the atoms of which are used as the connecting links in organic molecule construction. For implementation of this process, all living organisms have their own energy sources. What if this process is modeled in a technical device?" (7 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/problems-hydrogen.zip

The Fundametal Sciences on the Way to Unity --- "The main merit of the unity axiom is in the fact that it has opened a direct way to a discovery of very mysterious electromagnetic structures

of the photons, the electrons, the nuclei, the atoms and the molecules." (28 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Fundam_sciences.doc

Pulse Power --- "Energy efficiency of the cell is implemented only in the case when energy source, which is similar to magnetic inductor, is used." (124 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/PulsePower.zip

The Law of Electric Circuit --- Average power in each section of electric circuit is equal to a product of average voltage, which is applied across this section, by average value of current. (69 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/TheLaw1.zip

On the Way to Pulse Power Engineering --- "Vital parts of all living organisms consume electric power by pulses. It is the most saving way of the use of electric power." (202 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Ontheway.zip

The Fifth & Sixth Lectures By The Unity Axiom: Physical Meaning Of Heat, Temperature, Relic Radiation, Photoeffect And Compton's Effect --- Conclusions: 1. Energy of the originated photon cannot be increased; it is decreased only; 2. In the Compton effect, behaviour of the photon does not obey the energy conservation law. (494 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/THEFIFTHLECTURE.zip

The Fifth Lecture by Unity Axiom: Physical Meaning of Heat, Temperature, Relic Radiation and Photoeffect --- "A new analysis of relic radiation shows that hydrogen atom production process by the Universe stars, not a mystical "Big bang", is its source. It has been disclosed that the equation suggested by A. Einstein for the interpretation of photo effect is a mathematical model of the law of formation of the atom and ion spectra discovered in 1993". (337 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/Article46PhysicalMeaningofHeatTemperature.zip

The Fourth Lecture of the Unity Axiom: Evolution of Atomic Theories --- "Now one can affirm that the idea of the orbital motion of the electrons in the atoms is on its way to history of science, and it is substituted by an idea concerning linear interaction of the electrons with the atomic nuclei. It describes reality more precise and carries much more information for profound understanding of an arrangement of the micro world." (277 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/Article43TheFourthLectureoftheUnityAxiom.zip

The Third Lecture by The Unity Axiom: What do Maxwell's Equations Describe? (477 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/THETHIRDLECTUREBYTHEUNITYAXIOM.zip

The Second Lecture of the Unity Axiom: Niels Bohr's Errors. (74 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/Article41NielsBohrsErrors.zip

The First Lecture of the Unity Axiom: Beginning of Fundamental Errors. (60 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/Article40FirstLectureoftheUnityAxiom.zip

Errors of the Nobel Committee --- Kanarev's story about the Authoritative Inquisitor and the beautiful lady named Unity Axiom. (HTML).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/index.html

Report to Unselfish Investor of My Scientific Investigations --- Kanarev's letter to his Japanese friend. (39 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Article38JapanFriend.doc

Physical Meaning of Temperature (192 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/PhysicalMeaningofTemperature.zip

New Intertpretation of Relic Radiation --- "The Universe radiation being called relic radiation is produced by the monoatomic hydrogen, which appears in the entrails of the stars of the Universe. Relic radiation has nothing to do with the so-called 'Big bang'." (124 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/NewIntertpretationofRelicRadiation1.zip

Analysis of Fundamental Contradictions --- "Electric energy is converted by the cell of the water electric generator of heat into heat energy with the energy efficiency index of more than 50. The law of conservation of energy does not operate." (266 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/Article31AnalysisofFundamentalContradictions.zip

New Fundamental Constant --- Explained by Prof. Ph. M. Kanarev, localizes photon in space.: The lower and upper limits of photon radius; The maximal wavelength of relic radiation corresponds to the maximal possible wavelength of the photon and the minimal wavelength corresponds to the gamma range. A hypothesis divides the electromagnetic radiation scale by two classes: the photon class and the wave class. (238 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/NewFundamentalConstant.zip
http://guns.connect.fi/innoplaza/energy/story/Kanarev/constant/index.html

Protocol N 1 of Control Testing of the Cell of Water Electric Generator of Heat --- "The law of conservation of energy is not fulfilled" (107 kb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/articles/PROTOCOLN1.zip

Global Energy Sources --- "Conversion of electric energy into thermal energy with energy efficiency index of more than 100 folds has been found." "...assumption that low-current water electrolysis is similar to its electrolysis, which takes place during photosynthesis." (173 kb)
b
Procedure Analysis of Measurement of Electric Power Consumed by the Water Electric Generator of Heat ---- An article for experimenters wanting to repeat the 'Kanarev Effect'.
http://guns.connect.fi/innoplaza/energy/story/Kanarev/analysis/index.html

Low Current Electrolysis of Water --- "Energy efficiency index of the low current electrolysis should be refined, but in any case it will be greater than 10, that's why there is every reason to think that a way to production of inexpensive hydrogen..."

http://guns.connect.fi/innoplaza/energy/story/Kanarev/electrolysis/index.html

Cell of the Thin Plasmaelectric Generator of Heat --- "Simplicity and 100% reproducibility of the experiments being described open a prospect for quick commercialization of the water electric generator of heat... The main task of the experiment was to check the hypothesis: "Electrodynamic influence on the water molecules gives the possibility to reduce energy expenses on destruction of their chemical bonds significantly; further fusion of these molecules increases considerably the output of additional energy in the form of heat... In order to solve this task, special experiments were carried out connected with electrodynamic destruction of chemical bonds of water molecules with electric pulses of various frequencies.

http://guns.connect.fi/innoplaza/energy/story/Kanarev/cell/index.html

Plasmaelectric Generator Cell

Generators of Global (Clean) Energy --- "... sell cavitation heating equipment with energy performance index up to 150%. Official science looks awry at this activity, because such results conflict with one of the main laws of physics: law of conservation of energy. But market profit is stronger than this law."

http://guns.connect.fi/innoplaza/energy/story/Kanarev/energygenerators/index.html

Water Electric Generator of Heat
http://guns.connect.fi/innoplaza/energy/story/Kanarev/generator/index.html

Prospects of Quantum Mechanics
http://guns.connect.fi/innoplaza/energy/story/Kanarev/quantum/index.html

Low Current Proces of Water Electrolysis
http://guns.connect.fi/innoplaza/energy/story/Kanarev/lowcurrent/index.htm

Global Energy
http://guns.connect.fi/innoplaza/energy/story/Kanarev/globalenergy/index.html

The Law of Formation of the Spectra of the Atoms and the Ions
http://guns.connect.fi/innoplaza/energy/story/Kanarev/spectrum/index.htm

Prospects of Hydrogen Energetics
http://guns.connect.fi/innoplaza/energy/story/Kanarev/hydrogen/index.html

The New Interpretation of Photoeffect
http://guns.connect.fi/innoplaza/energy/story/Kanarev/photoeffect/index.html

Electrons in Atoms
http://www.journaloftheoretics.com/Articles/4-4/EAtoms.pdf

The Law of Conservation of Angular Momentum and The Law of the Radiation of the Perfect Blackbody is the Law of Classical Physics
http://www.journaloftheoretics.com/Articles/4-4/Rotor.pdf

The Gravitational Radius of a Black Hole; (PDF)
http://www.journaloftheoretics.com/Articles/4-1/Kanarev-GravRadBH.pdf

Modelling the Photon and Analyzing Its Electromagnetic and Physical Nature; *Journal of Theoretics*. (PDF)
http://www.journaloftheoretics.com/Articles/4-1/Kanarev-photon-final.pdf

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Cold Fusion by Plasma Electrolysis of Water --- Ph.M. Kanarev & Tadahiko Mizuno (Faculty of Engineering, Hokkaido University, Japan); It has been disclosed that transmutation of the atomic nuclei of alkaline metals and the atomic nuclei of the cathode material takes place during plasma electrolysis of water.
http://guns.connect.fi/innoplaza/energy/story/Kanarev/coldfusion/index.html

Energy Balance of Fusion Processes of the Ozone Molecule --- It has been disclosed that new physical chemistry of the micro world facilitates the description of the ozone molecule fusion

processes within the framework of the law of conservation of energy.
http://guns.connect.fi/innoplaza/energy/story/Kanarev/ozone/index.html

Energy Balance of Fusion Processes of Molecules of Oxygen, Hydrogen, and Water --- A cause of additional energy appearance during covalent bond formation in the fusion processes of the molecules of oxygen and water has been disclosed, and the source of this energy has been established.
http://guns.connect.fi/innoplaza/energy/story/Kanarev/water/index.html

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http://guns.connect.fi/innoplaza/energy/story/Kanarev/index.html

On-Line Books in English
(Free Zip Word File Downloads from Innoplaza.net)

The Foundations of Physchemistry of Micro World (7th Edition) --- Quant1-5 (682 kb) http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant1-5.zip;

Quant6-7: (393 kb); http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant6-7.zip
Quant8-9 (298 kb); http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant8-9.zip
Quant10-11 (721 kb);
http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant10-11.zip
Quant12-13 (489 kb);
http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant12-13.zip
Quant14 (2.4 Mb);
http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant14.zip
Quant15-18 (1.4 Mb);
http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant15-18.zip
Quant19-20 (48 kb). http://guns.connect.fi/innoplaza/energy/story/Kanarev/book/Quant19-20.zip

Translated from Russian by A.I. Kostina (Pages: 340; Figures: 107; Tables: 48; physical and chemical equations: 315)

The new axiomatics of natural sciences is given in the book; on its basis, quantum physics and quantum chemistry have been returned to the classical way of development. The first steps are made on this way, which have led to discovery of the structure of the photon, the electron, and the principle of the formation of the atomic nuclei, the atoms and the molecules.

The Planck's Law of radiation of perfect blackbody is given on the basis of classical concepts, and the connection of quantum phenomena with the laws of classical physics is proved.

The application of the new theoretical results to the solution of practical energy tasks on the basis of plasma electrolysis of water is shown. Due to this electrolysis, additional heat energy generated as well as hydrogen and oxygen are the energy containing gases. Cold Nuclear transmutation of the atomic nuclei of alkaline metals and the atomic nuclei of the cathode material takes place during plasma electrolysis of water.

The book is intended for physicists, chemists and other specialists who are seeking the new directions for understanding the foundations of the microworld and the new energy sources.

Book Lectures by the Unity Axiom --- (0.9 Mb).
http://guns.connect.fi/innoplaza/energy/story/Kanarev/unityaxiom/LecturesbytheUnityAxiom.zip

Kanarev's new printed book "The Resurrection of Exact Science" can be ordered from http://www.newpowers.org/order.html .

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http://www.freeenergynews.com

Instructions for Building Kanarev Electrolysis Cell

"The following was received by email from Prof. Kanarev" [to Sterling Allen (May 6, 2006)]:

"If you wish to reproduce quickly my experiment on lowcurrent electrolysis of water I am ready to consult you. Cost of videofilm and the information necessary for manufacturing of labo-ratory model electrolyser, its start in work and reception of necessary results - $2000.

"If you agree, transfer on my account in the beginning $1000 and I send to you videofilm by duration one minute. If after viewing film you decide will make and to test laboratory model electrolyser after transfer still $1000 I send to you parameters of cells and other information. After manufacturing model and the beginning of tests I shall give you recommendations on structure of a solution and modes of start electrolyser. The duration of the video is one minute.

"Videofilm: Low Current Electrolysis of Water

"The text on a course of film in Russian. A reference point after time shown by a video-camera. The duration of Video is one minits.

"The beginning: "Water --- a new energy source"

"9-57 --- Pay attention, on the right two light wires go from the power supply to a cell. Now they will be switched - off, and process of an output of gases will proceed.

"10-18 --- Has passed twenty minutes from the moment of switching-off of the power supply, but the output of gases proceeds.

"10-31 --- The power supply is included

"The additional information: At a continuous feed electrolysis the power consumption on reception of hydrogen from water makes 1,5-2,0 Wh/liter. If a feed periodically to disconnect, it is possible to reduce a power consumption by reception of hydrogen up to 0,5-1,0 Wh/liter and is more significant. After switching-off of the power supply process of an output of gases proceeds some hours.

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http://www.jeanemanning.ca/articles/russian_discoveries.php

Russian Discoveries
(Excerpt)

by
Jeane Manning

"Dr. Philipp Kanarev, chairman of Kuban State Agrarian University's Department of Theoretical Mechanics, Krasnodar, Russia, developed a method of water plasma electrolysis that he sees as the best way to get cheap hydrogen from water. He tells why his 1987 report on it didn't reach news media nor the open literature about patents. Since his device was developed "at the enterprise of the military industrial complex", his certificate of invention was stamped "for service use only" and its content was not published openly.

"At that time, the focus was on purifying and disinfecting water with the help of the plasma in his reactor. Two years later Drs. Stanley Pons and Martin Fleischmann announced they had excess energy output during a type of electrolysis. This renewed research efforts behind the former Iron Curtain as well as in the West. In 1996 one of Kanarev's co-authors on the 1987 certificate published results on the excess energy output from the plasma process. The next year they applied for a patent. Then a full group of Russian scientists tested the device and documented its output. Technical people can read more about Kanarev's theory in his books, such as *Crisis of Theoretical Physics*. Results of the plasma-electrolytic experiments were predicted by the theory."

Philip M. KANAREV

Pulse Motor

PESWikiNews

VIDEO : http://www.youtube.com/watch?v=kSLfrh-CFYQ

F. M. KANAREV : Self-Rotating Generator (Google Translation)

RU PATENT # 2399144 : INERTIAL ELECTROMECHANICAL PULSE SOURCE OF POWER SUPPLY [PDF]

RU PATENT # 2340996 : INERTIAL ELECTROMECHANICAL PULSE SOURCE OF POWER SUPPLY [PDF]

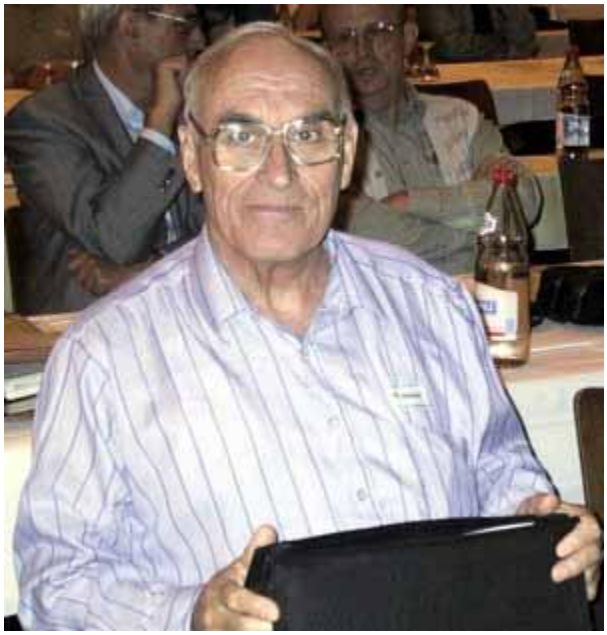
PATENTS

F.M. KANAREV : Self-Rotating Generator (Google Translation)

F.M. KANAREV : Pulse Power [ZIP.DOC]

F.M. KANAREV : The Law of the Electric Circuit [ZIP.DOC]

F.M. KANAREV : On The Way to Pulse Power Engineering [ZIP.DOC]



http://pesn.com/2010/10/13/9501712_Kanarev_announces_self-running_motor-generator/
Oct. 13, 2010

Kanarev Announces a Self-Running Motor-Generator

Russian Professor Ph. M. Kanarev presents what he calls "the world's first self-rotating electric generator," saying it has been tested by a scientist from the Russian Academy of Science. The device was built to demonstrate Kanarev's theory of the mocrocosmos.

by

Sterling D. Allan
Pure Energy Systems News

EXCLUSIVE

On Sept. 12 Professor Philip Mihailovich Kanarev sent me a video by email saying: "It seems to me this VIDEO will be interesting to you and to the readers of your site."

Dear Mr. Sterling D. Allan,

If you have a translator speaking Russian, almost all information which interests you can be found at the following addresses: (www.akademik.su).

http://kubsau.ru/science/prof.php?kanarev

http://www.sciteclibrary.ru/rus/avtors/k.html

I made the experiments only to check my theory of a microcosm. The new theory of a microcosm has prompted me to see if could make a self-rotating generator. It is made and works. Prospects and areas of its application have no borders. It will be the basic source of future ecologically pure power. Under the theory of a microcosm, I spend the first scientific seminar in a month [in Krasnodar on 25-27 November 2010]. It will be broadcast on the Internet in Russian and English languages. All information on the seminar can be found at http://www.akademik.su.

I have sent you video about the first motor-generator. I have asked one of academicians of the Russian Academy of Sciences to head the commission on test of our generator. Such tests have already passed. In the report results of tests are written down. The first-ever motor - the generator makes energy more than consumes from a network. By the end of the year the second generator will be tested. The accumulator [capacitor] will be a source of its input. The second generator will feed an electrolyzer and simultaneously charge the accumulator. Term of its service will be equal to accumulator service life, that is it will work about five years and will use only energy of the accumulator.

Best regards,

D. T. S. Prof. Kanarev

Video :

http://www.youtube.com/watch?v=kSLfrh-CFYQ

Professor Philip Mihailovich Kanarev sent me a video by email saying: "It seems to me this VIDEO will be interesting to you and to the readers of your site."

Being preoccupied with other matters that day, I overlooked that email and did not see it again until yesterday, when I received another email from Kanarev regarding his analysis and critique of the 2010 Nobel Prize in Physics awarded jointly to Andre Geim and Konstantin Novoselov "for groundbreaking experiments regarding the two-dimensional material graphene". Apparently, Kanarev has been working in this field as well, and may even be further along in his work than these two who received the Nobel Prize.

Last night I posted his analysis, along with a brief preface. I also mentioned that I had sent an email to Kanarev asking for more information about the motor-generator. Was it his design? What does it do? How much energy does it generate? How did he measure it?

He responded at 4:48 AM Mountain saying: (slightly edited)

Dear Mr. Sterling D. Allan,

If you have a translator speaking Russian, almost all information which interests you can be found at the following addresses:

http://www.akademik.su

http://kubsau.ru/science/prof.php?kanarev

http://www.sciteclibrary.ru/rus/avtors/k.html

I made the experiments only to check my theory of a microcosm. The new theory of a microcosm has prompted me to see if could make a self-rotating generator. It is made and works. Prospects and areas of its application have no borders. It will be the basic source of future ecologically pure power. Under the theory of a microcosm, I spend the first scientific seminar in a month [in Krasnodar on 25-27 November 2010]. It will be broadcast on the Internet in Russian and English languages. All information on the seminar can be found at http://www.akademik.su

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Best regards,

D. T. S. Prof. Kanarev

YouTube
Oct. 12, 2010

Here is a transcription of the female voiceover. If you can tell what some of the words are that I have placed a question mark next to, please let me
know.

"You see the world's first self-rotating electric generator. The rotor performs the function of a motor; and the stator performs the function of a generator. [??] can be fed from a socket, but it can be fed from an accumulator [capacitor]. The stator generates two working electrical impulses. One of them is used for the technological[?] electrolysis. The second feeds the bulb, but [it can] also be used to charge the accumulator. As a result, an[?] eternal[?] source of energy is being formed with a life span equal to the life span of [the] accumulator."

Self-Rotating Generator

Kanarev FM

Generators of electricity - a long-standing invention of mankind. They are the main source of electrical energy. To ensure that they generate electricity, need her primary source, whose role is most often carries water or water vapor. There are generators that are driven by electric motors, energy consumption from the mains. In this case, as usual, the electric motor rotates the generator rotor and stator produces electrical energy. The old laws of electrodynamics prohibit the existence of a generator rotor that would include the power grid, and drew up to the stator electrical energy or vice versa, the stator would include the power grid, and drew up the rotor to electrical energy. New laws of electrodynamics, by contrast, show how to do such a generator, and it was made (Photo). Terms of Reference for its production, we developed proved to be surprisingly simple, and it was successfully implemented talented Russian engineer **Sergei Zatsarininym**.

A two-month test the world's first self-rotating generator of electric pulses showed that such a generator is the future. In this case, energy consumption for idle self-rotating generator of electrical pulses are reduced to almost zero, and increased moment of inertia of the rotor can easily overcome the mechanical resistance and a small short-term magnetic resistance. As a result of energy generated in the stator, is determined not by the energy supplied from an external power source, and the kinetic energy of the rotor, which he receives in the process of starting to work. Subsequently, its value is supported by short pulses of the primary power source, which leads to the fact that amount of energy output is greater than the amount of energy consumed! In addition, first used the principle of energy recovery pulse inhibit rotation of the

rotor, to power the generator. While stable fixed 5-fold increase at 2000 rpm. At high speeds recorded a 10-fold excess, but a small moment of inertia of the rotor does not allow us long-term (more than 10 minutes) to keep such a regime. The first sample of self-rotating generator generates pulses of current to 120 A and the second, which is already under construction, will generate pulses of up to 200 A with a pulse, close to zero and the rotor speed from 3000 to 5000 rpm. This will be a generator to power the electrolysis.

Another feature of the self-rotating generator of electrical pulses, which is now called "motor-generator(MG) - complexity of multi-use. For example, a motor-generator designed to power the electrolyzer, will not be able to exercise their functions on the drive the car instead of gasoline engine. As a result, the problem of developing generators for specific purposes. But, as the experience gained, it is solvable and has an open road for domestic power units (5-10kW), to supply which is enough battery power. In this case, the generator will automatically recharge the battery. Battery power would also be sufficient for the power block, propelling the car.

He has been testing his theory of microcosm and has developed a generator that is self running and generates free electricity. Fascinating and a much welcome proof of concept for this type of technology.

"You see the world's first self-rotating electric generator.

"The rotor performs the function of a motor; and the stator performs the function of a generator.

"[[At present it is]] fed from a socket, but it can be fed from an accumulator [capacitor].

"The stator generates two working electrical impulses.

One of them is used for the technological [[process]].

The second feeds the bulb, but also [[can]] be used to charge the accumulator.

href="http://scitizen.com/nanoscience/nano-capacitors-the-root-towards-the-super-power-battery_a-5-2918.html">http://scitizen.com/nanoscience/nano-capacitors-the-root-towards-the-super-power-battery_a-5-2918.html

Everything is Holographic Intelligence On Hierarchic Dimensional Levels !

Here is a new fractal-based "spin-glass" model of the Cosmos which incorporates the attributes of a fifth primary field and the Langrange points described in superstring theory with the harmonic resonances contained in the ancient Hindu text known as the Rig Veda. It is taken as given that at the baseline, everything in the known universe can be viewed as, and indeed is comprised of, information.

Information is conveyed in the Torsion Field at a rate which is at least 109 times the speed of light. This revelation, which is largely due to the ground breaking work of Russian scientist **V.A. Dubrovsky** up to 1985, has now been confirmed by at least six other laboratories in the former

Soviet States. Based on the ground breaking work of **V.A. Ablekov, David Bohm and Karl Pribram** it has been determined that the Torsion Field is holographic.

Since all known substances possess a non-zero collective spin state, then all substances must also create and exist within their own localized Torsion Fields. We now know that the expanse and frequency structure of any substance is determined by its chemical composition and the expanse structure of its molecules or crystalline lattice.

"Unlike electromagnetism, where analogous charges repel and opposite charges attract, in torsion fields similar charges attract and opposite charges repulse. As the Torsion Field is generated by a classical spin, Torsion Field emissions are non-dissipative and are not attenuated by the interposition of mass or the effects of distance. Torsion Fields cannot be screened by any known materials or combination of materials or fields.

At the Institute for Problems of Materials Science in Kiev, scientists have for more than 25 years used torsion field generators as an essential part of the manufacture of exceedingly exotic materials for which we have no comparable products in the West. In addition to providing a fascinating insight into the way consciousness may operate at the level of vicinal water in the human brain, a clear understanding of these mechanics could enable us to create energy storage devices which demonstrate energy conversion characteristics well in excess of gasoline [650 watt hours/kilo]41. At the Institute for Problems of Materials Science, Trefilov, Tovschuk and Kovalyuk have created a solid state energy cell [energy accumulator] which produces 850-1040 watt hours/kilo, in laboratory models. The reliability of their claims regarding this technology have been verified by INEL, DARPA and the ATML. A key element of their construction method relies on the effects of a torsion field beam which operates during the process of crystalline lattice deposition42. IPMS has also perfected the use of a torsion field device which enables them to manufacture mono-molecular powders of strategic metals which can be stored in conventional glass containers without voluntarily generating static electricity.

PATENTS

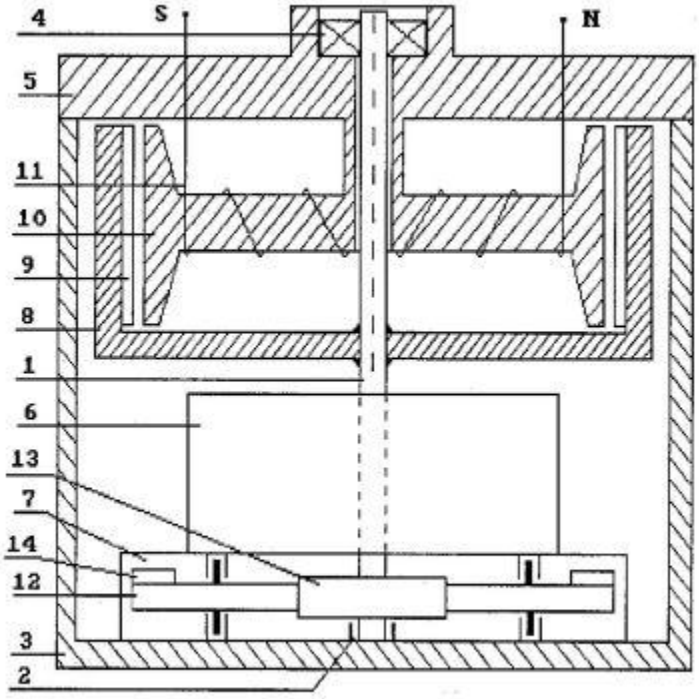
INERTIAL ELECTROMECHANICAL PULSE SOURCE OF POWER SUPPLY RU2399144

[PDF]

Publication date: 2010-09-10
Inventor(s): KANAREV FILIPP MIKHAJLOVICH [RU] + (KANAREV FILIPP MIKHAJLOVICH)
Applicant(s): FEDERAL NOE G OBRAZOVATEL NOE [RU] + (FEDERAL'NOE GOSUDARSTVENNOE OBRAZOVATEL'NOE UCHREZHDENIE VYSSHEGO PROFESSIONAL'NOGO OBRAZOVANIJA "KU)
Classification: - international: H02K57/00; H02K7/116; H02K57/00; H02K7/116

Abstract -- FIELD: electricity. ^ SUBSTANCE: proposed source of power supply consists of

vessel with electric motor, on shaft of which there is rotor installed with permanent magnets of various polarity, magnetic conductor with winding rigidly connected to vessel, and current collector in the form of magnetic conductor winding outputs differing by the fact that vessel comprises cover and oppositely installed thrust bearings for electric motor shaft, one of them is arranged on vessel cover, and the other one - on opposite wall of vessel. At the same time on shaft between wall of vessel and electric motor there is block of unbalance gears installed, having central gear and additional gears with unbalances. Electric motor, block of unbalanced gears and rotor of electromechanical generator of electric pulses have single rotation shaft. Magnetic conductor interacting with permanent magnets on inner surface of rotor rigidly connected to cover and fixed, which facilitates removal of electric potential from winding of magnetic conductor. Combination of mechanical torque pulses generator with electromechanical generator of pulses on single shaft reduces load on shaft of electric motor. ^ EFFECT: reduced costs of electric energy.

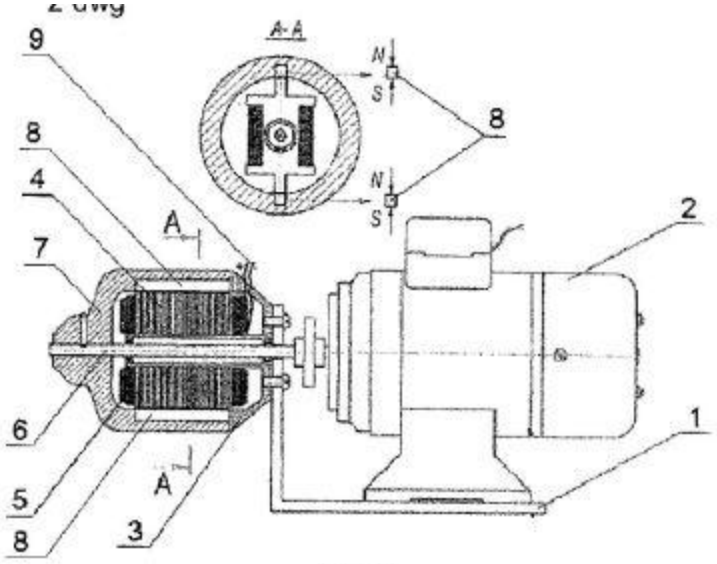


PULSE ELECTROMECHANICAL SOURCE OF SUPPLY
RU2340996

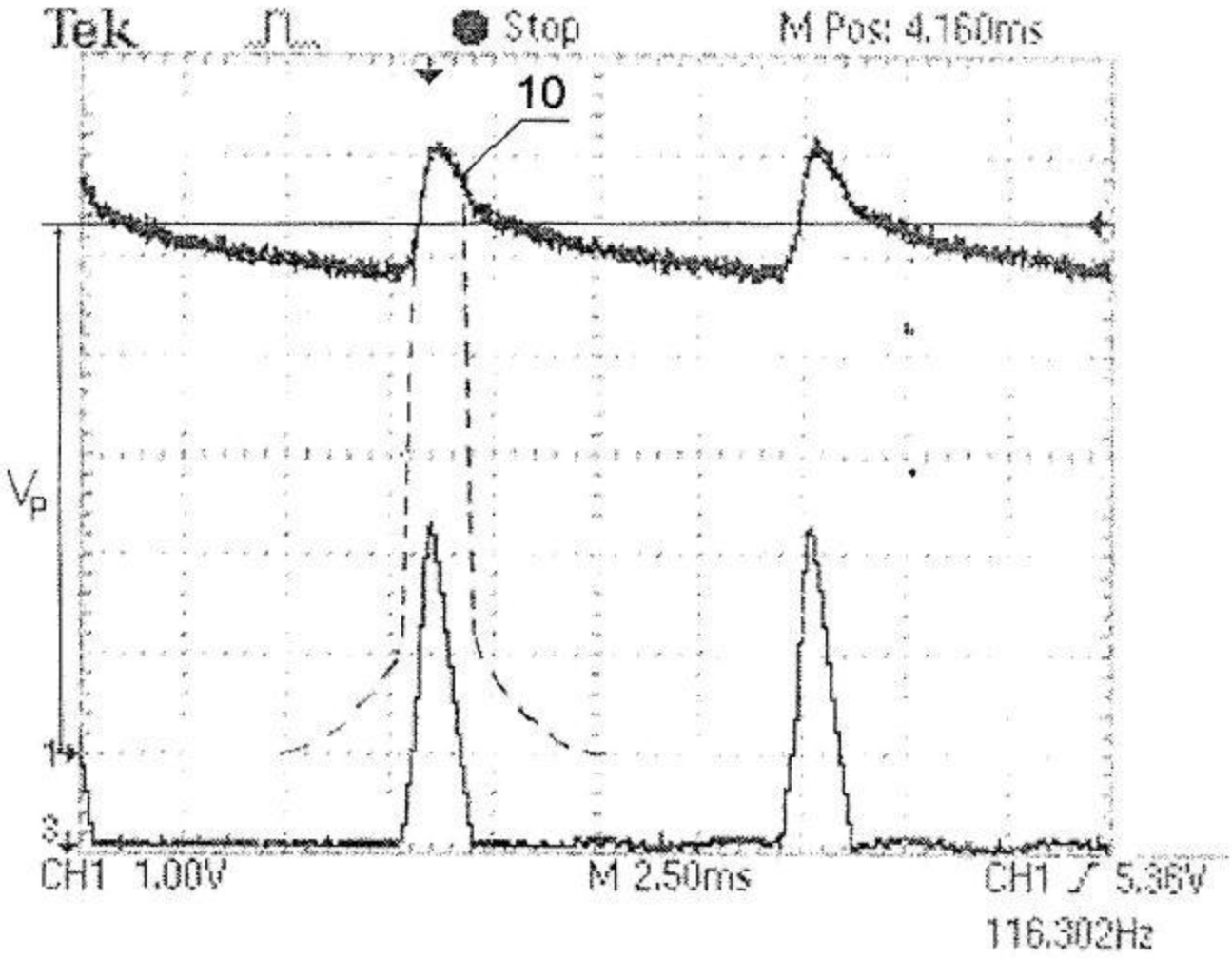
[PDF]

Abstract: Invention is related to the field of electrical engineering ande physical and chemcial technologies, and refers to devices used for water electrolysis. Substance of invnetion consists in the fact that in pulses electromechanical source of supply that contains casing (1), stator (3) in

the form of magnetic core (4) with winding (5), rotor (7) and current collector (9), according to the invention, in casing (1) electric motor (2) is installed (2) on the shaft (6) of which rotor (7) is installed with permanent magnets (8), which are isntalled along magnetic core (4) of windings (5) of stator (3), which is rigidly fixed to casing (1) at that permanent magnets (8) are installed opposite to each other with the possibility of magnetic power lines penetration through windings (5) of stator (3), at that internal surfaces of permanetn magnets (8) have dissimilar poles, and as current collector windings (5) of stator (3) are used. Effect: Reduction of power inputs for water electrolysis.



Фиг. 1



Фиг. 2

OTHER PATENTS

METHOD AND DEVICE FOR PRODUCING AND USING HEAT
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Heat Generator
US2009263113 (A1) - 2009-10-22

DEVICE FOR PRODUCTION OF OXYGEN AND HYDROGEN
RU2004103020

DEVICE FOR PRODUCTION OF HEAT ENERGY, HYDROGEN AND OXYGEN
RU2284370

APPARATUS FOR PRODUCING HEAT POWER, HYDROGEN AND OXYGEN
RU2003135737 (A) - 2005-05-20

DEVICE FOR PRODUCTION OF THERMAL ENERGY, HYDROGEN AND OXYGEN
RU2258098

DEVICE FOR PRODUCTION OF THERMAL ENERGY, HYDROGEN AND OXYGEN
RU2003135142

DEVICE FOR PRODUCTION OF THE HEAT ENERGY, HYDROGEN AND OXYGEN
RU2003133344

APPARATUS FOR PRODUCING HEAT ENERGY, HYDROGEN, AND OXYGEN
RU2003132719

APPARATUS FOR PRODUCING HEAT POWER, HYDROGEN AND OXYGEN
RU2256006

DEVICE FOR PRODUCING HEAT ENERGY, HYDROGEN, AND OXYGEN
RU2228390

ELECTROLYTIC CELL OF LOW-AMPERE ELECTROLYZER FOR PRODUCTION OF HYDROGEN AND OXYGEN FROM WATER
RU2227817

DEVICE FOR PRODUCTION OF HYDROGEN AND OXYGEN
RU2232829

FACILITY FOR GENERATION OF GAS MIXTURE AND TRANSMUTATION OF NUCLEI OF ATOMS OF CHEMICAL ELEMENTS
RU2210630

CATHODE FOR PLASMOELECTROLYTIC REACTOR
RU2186153

HEAT ENERGY, HYDROGEN AND OXYGEN PRODUCING APPARATUS
RU2213162

APPARATUS FOR PRODUCING ELECTRICAL AND HEAT ENERGY, HYDROGEN, AND OXYGEN
RU2177512

APPARATUS FOR PRODUCING HEAT ENERGY, HYDROGEN AND OXYGEN
RU2175027

GEAR TO GENERATE THERMAL ENERGY, HYDROGEN AND OXYGEN
RU2167958

GEAR TO GENERATE THERMAL ENERGY OF HYDROGEN AND OXYGEN
RU2157427

APPARATUS TO GENERATE THERMAL ENERGY AND STEAM AND GAS MIXTURE
RU2157862

DEVICE FOR PRODUCTION OF HEAT ENERGY, HYDROGEN AND OXYGEN
RU2157861

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http://Kanarev.innoplaza.net
10.11.2005.

PULSE POWER

Ph. M. Kanarev

E-mail: kanphil@mail.ru

INTRODUCTION

There is an American scientist among the laureates of the first Russian prize "Global Energy" of the year of 2003. He was awarded the prize, because (as it was informed) he managed in his laboratory to form an electric pulse, which power is equal to power of all power stations of the world. Let us show that a mistake during the pulse power calculation is a result of this experiment. For this purpose, let us analyze energetics of pulses of voltage, current and power being obtained by us while determining electric energy consumed by the cell of water electric generator of heat [1].

ANALYSIS

The oscillograms of pulses of voltage, current and power being obtained with the help of PCS500A oscilloscope are given in Figs 1, 2 and 3. Horizontal scale is 50 μs per division. [1].

Fig. 1. Voltage pulse

Fig 2. Current pulse

Fig. 3. Power pulse

It is clearly seen (Figs 1, 2 and 3) that a form of pulses of voltage, current and power can be reduced to a rectangular form. Pulse duration will be equal to 0.00007 s, pulse repetition period is 0.00725 s, pulse frequency is =1000/7.25=137.9. Duty ratio is equal to S=0.00725/0.00007 =103.6. If the pulse form is considered to be a rectangular one, duty factor will be equal to Z=1/103.6=0.0096. Voltage pulse amplitude is =300 V, current pulse amplitude is =50 A and power pulse amplitude is =300x50= 15 kW. Taking it into consideration, average voltage value will be = 300x0.0096=2.88 V, average current value will be = 50x0.0096=0.48 A, average power value will be =15000x0.0096=144 W.

Let us put a question: has power pulse (Fig. 3) 15 kW actually, and is average value of pulse power equal to 144 W? Is the calculation carried out correctly? [1]

In accordance with Si-system, if one voltage pulse with amplitude of and with assigned duration is supplied per second and one current pulse with amplitude of and with duration, the above-mentioned values of voltage and current can be used for power calculation only in the case when their duration corresponds to one second. Such requirement originates from the power unit definition by Watt. Watt is work done per second by current and voltage continuously.

Consequently, pulse action of voltage and current should be prolonged till one second. Naturally, an oblong rectangle is obtained instead of a pulse in this case. Height of this rectangle multiplied by a pulse form factor (=1 if the pulse form is reduced to a rectangular form and =0.5 if the pulse form is reduced to a triangular form), and it will be an average value of voltage if voltage pulse is spread, an average value of current if current pulse is spread, and an average value of power if power pulse is spread.

If not one, but several pulses are generated during one second, the above-mentioned average values of pulses of voltage, current and power, as it is considered now, should be multiplied by frequency of pulse. This operation is equivalent to a division of amplitude values of voltage , current and power by duty ratio . If we take into account that , average values of voltage and current will be equal to:

(1)
(2)

If we pay attention to the formulas (1) and (2), we'll see that the amplitude values of voltage and current are reduced to a duration of one second; that's why their values are in strict correspondence with Si-system. It is a vivid example of the fact that average power of the pulse should be determined according to the formulas:

(3)
(4)

But this result is considered to be erroneous, because voltage and current are changed

simultaneously and synchronously, and their duty ratios are united in one duty ratio in power pulse; that's why, as it is considered now, average pulse power should be determined according to the formula [3], [4]

(5)

This value of average power will be obtained if we use the formula

(6)

Later on, we'll prove experimentally that power pulse (Fig. 3) has not 15000 W and 144.80 W, but only 1.40 W. That's why a question emerges: where does the essence of the mistake lie?

A single division by duty ratio of a product of the amplitude values of voltage and current (formula 5) is equivalent to stretching till duration of one second of power pulse. It appears from this that either voltage pulse, or current pulse (i.e. one of two pulses) is stretched to duration of one second in the formula (5). This process can be shown graphically (Fig. 4) if it is supposed that the experiment has lasted 300 s.

Fig. 4. Diagram of duration of maximal (300 V, 50A) and average (3.0 V, 0.5A) values of voltage and current

Average values of voltage of 2.88≈3.0 V and current 0,48 ≈0.50 A have been obtained in consequence of division of their maximal values of 300 V and 50 A by duty ratio of 103.6 ≈100. If we divide only voltage V by duty ratio, and we'll not divide current A, it will mean that current value during 300 s with average voltage value of 3.0 V will be equal to 50 A (Fig. 4, b). It is a vivid contradiction, which results in the mistake in the formulas (5 and 6).

As two values (voltage and current) are changed, it is necessary to determine average power during pulse consumption of energy according to the formulas (3 and 4). The formulas (5 and 6) take into account a change of one value, which forms power, voltage or current. That's why they should give an incorrect result. How can it be checked?

It is necessary to carry out such an experiment where not the electronic pulse generator connected with the whole grid galvanically has been used, but a rotating magnetic generator, like a magnetic inductor. Power pulses being generated by the magnetic inductor and sent to the consumer will be on the same shaft of the magnetic inductor and the electric motor, which rotates the magnetic inductor. Galvanic coupling between the general grid and the grid of the magnetic inductor is absent in this case. Electric energy of pulses of the magnetic inductor is converted into mechanical energy of the jointly rotating shafts of the magnetic inductor and the electric motor.

As the electric motor is connected in the general grid, an electric motor will show in general the energy being consumed by the electric motor, the magnetic inductor and the consumer connected to the grid of the magnetic inductor. If we write energy consumption by the electric motor, the magnetic inductor and the consumer and subtract electric energy consumption of the electric

motor and the magnetic inductor from the obtained value, we'll get energy being generated by the magnetic inductor and consumed by the consumer [5], [6].

Thus, as we have the readings of the electric energy meter and the pulses of voltage and current being written with the help of the oscilloscope, we can see, which formula (3 and 4) or (5 and 6) is correct and which one is erroneous. A diagram of such experiment is shown in Fig. 5. An oscillogram of pulses of voltage and current is shown in Fig. 6.

The cell of the water electric generator of heat has been used as a consumer of electric energy generated by the magnetic inductor (Fig. 7).

Fig, 5. Electrical diagram of the system: 1 - cell; 2 - electric motor; 3 - magnetic inductor; 4 - the coupling connecting the motor shaft with the generator shaft; 5 - electric meter; 6- Nektronix TDS 2014 oscilloscope

Fig. 6. Sample of an oscillogram of voltage and current being generated by the magnetic inductor

Fig. 7. Photo and diagram of the cell of the water electric generator of heat (patent No. 2258098)

Voltage pulses were rectified and corrected; the magnetic inductor was driven with the help of a single-phase electric motor from the grid (Fig. 5). In order to determine energy consumed by the electric motor, a domestic electric meter was used. The readings of the electric meter 5 were duplicated by the readings of voltmeter and ammeter being arranged before the cell 1 as well as by the readings of the oscilloscope 6 (Fig. 5). Heated solution energy was determined in a standard way.

The experimental results are given in Table 1. Here is power consumed by the cell from the mains. It is equal to a difference between the readings of the electric power meter when the load (the cell) is energized and de-energized. is heat power of the heated solution. is power being indicated by the voltmeter and the ammeter arranged before the cell. is power being indicated by the oscilloscope and determined according to the formula (10). is power indicated by the oscilloscope and determined according to the formula (11). is an index of efficiency of the solution heating process.

Table 1. Indices of the direct experiment

Experiment No.,	W,	W,	W,	W,	W	1	2	3	4	5	6	7	1	9.40	3.10
4.32	3.80	17.10	3.10	2	9.80	3.53	4.45	3.41	15.35	2.773	10.20				
3.10	4.40	4.30	19.35	3.344	11.30	4.80	5.10	4.80	21.60	2.355					
13.28	4.00	5.00	5.30	23.85	3.32										

We managed to adjust the magnetic inductor in such a way that it generated voltage pulses; its average amplitude was equal to . Average amplitude of current pulse was equal to. Pulse duration was . Pulse frequency was= 255.8 Hz. Pulse duty ratio was . It is natural that such pulse

form is easily reduced to a triangular form; then, . As a result, the formulas (1) and (2) give such average values of voltage and current.

(7)
(8)

A calculation according to the formulas (3 and 4) gives a result , which is close (9 and 10) to the readings of the meter (Table 1, experience 2) and the readings of voltmeter and ammeter (Fig. 5).

(9)
(10)

Then according to formula (5), average power will be equal to (Table 1, experiment 2)

(11)

It is an explicitly wrong result, because the electric power meter has shown that in this case the cell has consumed =3.53 W (Table 1, experience 2).

When we compare the calculation results according to the formulas (10 and 11) with the experimental results (Table 1, experiment 2), we see that when determining average power according to the oscillogram the amplitude values of voltage and current should be divided by duty ratio not once (11) as it is stipulated in the manuals [3], [4], but twice (10) as it is shown in the formulas (4 and 10). Only this power value will agree with the reality. It appears from this that the formulas (3, 4, 9 and 10) are correct and the formulas (5, 6 and 11) are erroneous.

Thus, the power pulse shown in Fig. 3 has not 15 kW and not 144.8 W, but only.

Let us see what the results are when motor 2 and magnetic inductor 3 (Fig. 5) are replaced by the electronic pulse generator (Figs 8, 9). The oscillograms of the experiment are shown in Figs 1, 2 and 3.

As it is shown in Fig. 1, an average amplitude of voltage pulses is 300 V when an average value of voltage is 3.0 V (Fig. 9); an average amplitude of current pulses (Fig. 2) was 50 A when an average value current is 0.5 A (Fig. 9). Pulse duration is =0,00007 when duty ratio is =100 and duty factor is = 0.01.

Fig. 8. Electrical diagram of the system: 1 - cell: 2- electronic pulse generator; 5 - electric power meter; 6- PCS500A oscilloscope

Fig. 9. Block diagram of electric value measurement: 1 - cell; 2 – PCS500A electronic oscilloscope; 3 - pulse generator

In accordance with the readings of voltmeter , ammeter and oscilloscope (Figs 8, 9), power at the input into the cell of water electric generator of heat is =3.0x0.5=1.50 W on average. A

calculation according to the formulas (3 and 4) gives a near result of 1.40 W.

A question arises: what power will be indicated by the instruments: voltmeter and ammeter arranged before the pulse generator (Figs 8 and 9)? It is quite natural that the voltmeter will indicate mains voltage = 220 V, current value is increased as well, because there are two loads before ammeter : cell 1 and electronic pulse generator 3. =0.65 A is in our experiment (Fig. 9). As a result, power implemented by pulse generator 3 and cell 1 is =220x0.65=143 W; it is at variance with the result (=1.4 W) being obtained according to the formulas (3 and 4). Their correctness has been proved by us experimentally.

Let us pay attention to the fact that the obtained result is =143 W. It is near to the result =144.8 being obtained during the calculation according to the incorrect formulas (5 and 6).

Now we know that actual energy consumed by the cell is indicated by the instruments (voltmeter , ammeter) arranged before it. The oscilloscope readings will correspond to actual consumption of energy by the cell if the formulas (3 and 4) are used. The formulas (5 and 6) distort a result in proportion to pulse duty ratio. When pulse duty ratio is equal 100, the formulas (5 and 6) increase an actual power consumption by the cell nearly 100fold. Such are the properties of electric circuits with the electronic pulse generator. It does not implement evident energy efficiency of the cell. Energy efficiency of the cell is implemented only in the case when energy source, which is similar to magnetic inductor, is used (Table 1) [5], [6].

Thus, we have eliminated the contradictions between the instrument readings and the calculations during pulse consumption of electric power. Now let us put such a question: according to what formula has the laureate of the prize “Global Energy” calculated pulse power? An answer is clear: according to the formula

(12)

which (as it is supposed in modern physics) determines instantaneous power of a pulse and which (as we have already shown) is a fictitious value.

As power of one pulse is given in the formula (12), it is quite natural that and can have very large values. But in any case, their product gives the fictitious value, not the actual value. If we take pulse duty ratio, which has been used in our experiments () and keep in mind that in order to get actual pulse power the right part of the formula (12) should be divided by a square of duty ratio (in the case being considered by), actual power of pulse is 10000fold less than the value, for which the prize was awarded. If we take into account the fact that pulse duration being obtained by the laureate was considerably less than the one being obtained during our experiment and duty ratio was considerably greater than 100, the actual value of the power pulse will be millionfold less than the value, for which the prize was awarded.

CONCLUSION

Let us put the representatives of the committee “Global energy” at their ease. Their mistake is nothing as compared with the mistakes made by the Nobel prize [7].

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THE LAW OF ELECTRIC CIRCUIT

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INTRODUCTION

In modern electrical engineering and pulse engineering, the following rules of power determination in the electrical circuits of continuous and pulse energy consumption have been established [2-4]:

1- during continuous consumption of electric energy its power is determined by the dependence:

(1)

where is average voltage magnitude, is average current magnitude.

2 - during pulse consumption of electric energy its power is determined by other dependence

(2)

Here is average amplitude voltage magnitude (Fig. 1); is average amplitude current magnitude (Fig. 1); is pulse duty ratio.

It is known that an electromagnetic voltmeter and an ammeter average the regular pulses of voltage and current satisfactorily. Average magnitudes of voltage and current being indicated by these instruments appear to be equal to the readings of an oscilloscope if they are calculated according to the formulas:

(3)
(4)

It appears from this that power should be determined according to the formula [1]

(5)

But the calculation according to this formula results to the violation of the law of conservation of energy. In some cases while heating, for example, of alkali liquor more thermal energy is released than electric energy, which is calculated according to the formula, is consumed (5). In order to do away with this contradiction, they decided to take duty ratio into account once (2). They explained it by the fact that voltage and current are changed simultaneously and synchronously (Fig. 1). A situation took place when the formula (2) was considered to be correct, and the formula (5) was considered to be erroneous. The contradictions in the instrument readings were ignored. For example, if a voltage pulse amplitude is equal to =1000 V, a current pulse amplitude is =50 A and a pulse duty ratio magnitude is =100, the formulas (3) and (4) give the following results: =10 V and =0.5 A. These magnitudes are indicated by the moving-coil instruments. If we take formula (2) as a basic one, we'll get

(6)
(7)

The moving coil instruments indicate nothing of the sort. Besides, it appears from the formula (2) that in case of a single division by pulse ratio only one magnitude out of two values is changed. For example, when voltage is changed, it becomes equal to =1000/100=10 V. Current magnitude remains unchanged, and it should be registered by the instruments. But none of them indicates such value.

In order to eliminate these contradictions, it was necessary to carry out an experiment, in which a source, which had no galvanic coupling with the whole circuit, would generate such voltage pulses.

Experimental part

The cell of the water electric generator of heat was used in order to carry out this experiment. The magnetic inductor 1302.3728 (GOST 3940-84) with the changed coil was used as a voltage pulse source (Fig. 1).

Fig.1. Sample of an oscillogram of voltage and current generated by the magnetic inductor

Voltage pulses were rectified and corrected. The magnetic inductor was rotated with the help of on-phase electric motor energized from mains (Fig. 2). A domestic electric power meter was used in order to determine power consumed by the electric motor. The readings of the electric power meter 5 were doubled by the readings of the voltmeter and the ammeter arranged before the cell 1 as well as the readings of the oscilloscope 6 (Tektronix TDS 2014, Fig. 2). Energy of the heated solution was determined in a standard way.

Fig. 2. Electric diagram of the system: 1- cell: 2- electric motor; 3 – generator (magnetic inductor); 4 – coupling connecting the motor shaft with the generator shaft; 5 – electric power meter; 6 – oscilloscope

The electric motor shaft 2 (Fig. 2) is connected with the magnetic inductor shaft 3 with the help of coupling 4. Total power consumption is registered by electric power meter 5. Power consumed by the cell is registered with the help of voltmeter , ammeter and oscilloscope 6.

Certainly, the magnetic inductor does not generate such voltage pulses, which provide significant energy effect. The magnetic inductor was adjusted in such a way that it generated voltage pulses, which average amplitude was equal to instead of 900…1000 V. Average amplitude of current pulse was equal to instead of 80…100 A. Pulse duration was instead of 100 μs. Pulse duty ratio was instead of 80…100. Besides, a pulse form differed from the necessary on. Nevertheless, energy effect was registered.

The experimental method is simple. Solution consumption by the cell is determined. The electric motor, which makes the magnetic inductor rotate, is connected to the mains; it registers power consumed by the electric motor – magnetic inductor – cell system as well as the readings of the test instruments being arranged before the cell. Then the cell, which plays the role of a load, is de-energized. Energy consumption is registered during idle run of the electric motor- magnetic inductor system. A difference between these readings is equal to energy being consumed by the cell. Simultaneously, solution consumption and a change of its temperature are registered. In order to facilitate the analysis, consumed energy has been converted into power.

The experimental results are given in Table 1. Here is power consumed by the cell from the mains. It is equal to a difference between the readings of the electric power meter when the load (the cell) is energized and de-energized. is heat power of the heated solution. is power being indicated by the voltmeter and the ammeter arranged before the cell. is power being indicated by the oscilloscope and determined manually. is an index of efficiency of the solution heating process.

Table 1. Indices of the direct experiment

Experiment No. , W, W , W, W12456719.403.104.323.803.1029.803.534.45-2.77310.203.104.404.303.34411.304.805.104.802.35513.284.005.005.303.32

As it is clear, average power of = (4.3 …5.1) W being determined in accordance with the average values of current and voltage is close to power value of = (3.1….4.8) W on the electric motor shaft when the cell is energized (without taking power for idle run into consideration) and

power of = (3.8….5.3)W being obtained while oscillogram processing. If we multiply power value being indicated by the voltmeter and the ammeter by duty ratio , it will correspond to a single registration of duty ratio, which is described in all textbook on power engineering and pulse engineering. In this case, the readings of the voltmeter, the ammeter and the oscilloscope will exceed the readings of the electric power meter 4.7 fold. It does not correspond to reality. It appears from this that when average power is determined according to an oscillogram, the amplitude values of voltage and current should be divided by duty ratio not once as it is mentioned in the textbooks, but twice as it is shown in the formula (5). Only such power value will correspond to reality.

Now let us see what results can be obtained if electron pulse generator 2 (Fig. 3) is used instead of motor 2 and magneto 3 (Fig. 2). The readings of voltmeter and ammeter as well as the readings of oscilloscope 6 are not changed if the pulse parameters are the same. Meter 5 will indicate a different value, and we cannot predict it. An average value of current indicated by ammeter is nearly 0.4 A. Ammeter will indicate a value of nearly 0.6 A. Naturally, voltmeter will indicate mains voltage of 220V. Power, which is registered by ammeter and voltmeter , is as follows:. . Meter 5 will indicate the same value.

Fig. 3. Electrical diagram of the system: 1- cell; 2 – electron pulse generator; 5 – electric power meter; 6 – oscilloscope

Thus, if the electron pulse generator is used instead of the motor and the magneto, power consumed by the cell from mains is changed by fold. It appears from it that power of 132 W is fictitious power, which is not consumed by the cell. The cell consumes 4.0W; it is proved by the measurement results given in Table 1. That's why we have every reason to call the difference of powers a fictitious power.

It appears from the analysis that average power in each section of the electric circuit is equal to a product of average voltage, which is applied across this section, by average value of current. It is the law of electric circuit.

For example, average voltage of 10 V is applied in the section of the electric circuit before the cell (Fig. 3); average value of current existing in this section is equal to 0.4 A. If we consider it, we'll see that the value of power in this section of the electric circuit will be 10 x 0.4= 4 W. Let us make a vertical section on the diagram (Fig. 3) before meter 5. Average value of voltage in this section is equal to mains voltage of 220 V. If average value of current in this part of mains is equal to 0.6 A, average power in this section of the electric circuit will be 220 x 0.6= 132 W. It is the law of electric circuit, which has been checked with the help of many experiments being carried out by us.

We do not know if there is an enunciation of this law in modern electrical engineering, but without this law it is impossible to make a correct analysis of power engineering of mixed systems where energy is transferred and consumed continuously and by pulses.

Thus, in order to determine average power consumed by the cell, it is necessary to multiply average values of voltage and current indicated by voltmeter and ammeter or to take a product

of average amplitude values of pulses of voltage and current indicated by the oscilloscope and to divide them by duty ration do not to once (as it is mentioned in the textbooks), but twice. Only in this case the results will correspond to average power actually consumed by the cell.

CONCLUSION

The law of electric circuit: average power in each section of electric circuit is equal to a product of average voltage, which is applied across this section, by average value of current.

The law of electric circuit sent the law of conservation of energy in its modern enunciation to the science history section.

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ON THE WAY TO PULSE POWER ENGINEERING

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Abstract: The direct experiment results are presented. They show falseness of a determination of average power consumed in the form of regular pulses by means of a single record of duty ratio of pulses of voltage and current. Average power of regular pulses of voltage and current is determined by means of multiplication of amplitude values of voltage and current and division of the result by square of duty ratio.

Introduction

It is stipulated in modern electrical engineering, in the textbook on pulse engineering as well as in numerous scientific articles that if electric energy is consumed as regular pulses of voltage and current, average power is determined by means of division of amplitude multiplications of voltage and current by their duty ratio. In this case, processing results of oscillograms of voltage and current coincide with the readings of the devices being installed before the pulse generator and prove the energy conservation law when energy is consumed by pulses. It is considered that it is enough to ignore contradictions in the readings of the measuring devices as well as a number

of vivid physical contradictions.

Now we'll show that it is impossible to leave this problem as it is, because it restrains development of other tasks of pulse power engineering. As an example in order to analyse the problem, let us consider the experimental results being obtained with the participation of the independent experts.

Control Test Protocol

The representatives of the company SITIS (the city of Sarov) have expressed their wish to carry out the joint tests of the cell of the water electric generator of heat (Fig.1).

The test was carried out on 27 February, 2004, at the Kuban State Agrarian University (KSAU), city of Krasnodar. The independent experts observed the experiments, registered the measurement results of all values; after these results were processed, they made their conclusion, which is given below.

Fig. 1. The photo of the cell of the water electric generator of heat

The diagram of the experimental installation is given in Fig. 2. The diagram of electric energy supply to the cell of the water electric generator elaborated by the authors remains unchanged. The measuring part of the diagram is supplemented by PCS-500 digital memory oscilloscope arranged in parallel to ACK-2022 Aktakom standard oscilloscope and PX120 multimeter, which is not shown in the diagram (see Fig. 3).

Fig. 2. Diagram of the experimental installation: 1 – tank for solution; 2 – thermometer; 3 - electronic scales; 4 – solution feed duct; 5 - rotameter; 6 – solution feed regulator; 7 – the cell of water electric generator of heat (is being patented); 8 – thermometer; 9- heated solution discharge; 10- tank

Fig. 3. Metering equipment connection diagram: 1- cell of the water electric generator of heat; 2- pulse generator; 3- ACK-2022 oscilloscope; 4- PCS-500 oscilloscope; 5 - P-3 Wheatstone bridge

Instruments and equipment used during the experiment

The special experimental cell of the water electric generator of heat (Fig. 1). The electronic scales with scale division value of 2.0 g. A stop watch with scale division value of 0.1 s. Thermometers with the scale division of 1 degree. Voltage and current at the input of the cell of the water electric generator of heat were determined wit the help of four sets of devices: M2004 voltmeter of accuracy class of 0.2 (GOST 8711-78); M20015 ammeter of accuracy class of 0.2 (GOST 8711-60); ACK-2022 and PCS-500A oscilloscopes as well as PX120 electronic multimeter, which measured voltage, current and cell input power at the same time. It is not shown in the diagram (Fig. 3). This instrument measures effective value of alternating voltage of 500 mV to 600 V, alternating current of 10 mA to 10 A, direct current of 10 mA to 10 A, direct voltage power of 6 kW, alternating voltage power of 6 kW, reactive power of alternating voltage

of 6 kW and gross power of alternating voltage of 6 kW.

For the sake of clarity, we should note that the voltage measurement range switch of M2004 voltmeter corresponded to maximal voltage value of 30 V: the switch of M20015 ammeter corresponded to maximal current value of 1.5 A (Fig. 3). The amplitudes of pulses of these values were 300 V and 50 A, respectively. It appears from this that it has been correct to PX120 multimeter, which is not shown in the diagram (Fig. 3).

In order to reduce heat losses, which were not taken into account in the experiment, temperature difference of the solution was kept small prior to its heating in the cell and after heating .

Determination of electrical energy, which is consumed by the cell, with the help of the voltmeter and the ammeter and ACK-2022 oscilliscope

The voltage pulse oscillograms are given in Figs 4 and 5. An oscillogram of one voltage pulse is given in Fig. 6. The current oscillograms are given in Figs 7, 8 and 9.

Fig. 4. Voltage
Fig. 5. Voltage
Fig. 6. Voltage pulse in μs range
Fig. 7. Current
Fig. 8. Current
Fig. 9. Current

Pulse scale is equal to 10. Average amplitude of voltage (Figs 4, 5 and 6): Uacp = (29 + 31 + 8 + 33+ 32+40+40)x10/7 = 304.3 V. Current value was determined as voltage drop across the resistor with resistance of 0.1 Ohm. Taking this into account, average current amplitude (Figs 7, 8 and 9) is equal to Iacp = (1.7+0.8+1.7+2.1+3.2+0.7+2.1+1.3+2.4+1.4+1.4) x 0.2x10/(11x0.1) = 34.18 A. Pulse repetition period is T = 7.25 ms.

Pulse duration was determined according to an oscillogram in the microsecond range (Fig. 6). The pulse form was reduced to a triangular form in such a way that the area of the triangle was equal nearly to the area circumscribed by a complex form of the pulse curve. In this case, pulse duration is equal nearly to tp=0.14 ms. Pulse frequency f = 1000/7.25 = 137.9 Hz. Pulse duration S = 7.25/0.14 = 51.78.

If we accept a triangular form of the pulse (0.5), we'll get a value of duty ratio Z = 0.5/51.78 = 0.01. Average value of pulse voltage Ucp = 304.3 x 0.01 = 3.04 V. Average value of current in pulses Icp = 0.01 x 34.18 = 0.34 A.

Average values of voltage and current can be determined as values of voltage and current corresponding to one second. Taking into account the triangular form of pulses (0.5), duration of one pulse (0.00014 s) and pulse frequency (137.9), we'll have Ucp = 304.3 x 0.5 x 0.00014 x 137.9=2.94 V, Icp = 34.0 x 0.5 x 0.00014 x 137.9 = 0.33 A. Let us pay attention to the fact that the values of average voltage and current being determined with the help of ACK-2022

oscilloscope are less than the values being determined with the help of the voltmeter and the ammeter. The experimental results being obtained with the help of the voltmeter, the ammeter and ACK-2022 oscilloscope are given in Table 1.

Determination of electrical energy, which is consumed by the cell, with the help of PCS500A oscilloscope

The oscillograms of pulses, current and power being obtained with the help of PCS500A oscilloscope are given in Figs 10, 11 and 12. Scale on horizontal is 50 μs/div.

Fig. 10. Voltage pulse
Fig. 11. Current pulse
Fig. 12. Power pulse

It can be seen (Figs 10, 11 and 12) that the form of the pulses of voltage, current and power can be reduced to a rectangular form. Pulse duration will be equal to 0.00007 s, pulse repetition period will be 0.00725 s, pulse frequency will be 1000/7.25=137.9, pulse voltage amplitude will 300 V, current pulse amplitude will be 50 A and power pulse amplitude will 15 kW.

Duty ratio will be equal to S=0.00725/0.00007=103.6. If the pulse form is considered to be a rectangular one, duty factor will be equal to Z=1/103.6=0.01. Taking it into consideration, average voltage value will be 300x0.01=3 V, and average current value will be 50x0.01=0.5 A.

Let us pay attention to the fact that average values of voltage and current being determined with the help of the voltmeter and the ammeter as well as with the help of both oscilloscopes have close values. The experimental results being obtained with the help of the voltmeter and the ammeter and ACK-2022 and PCS500A oscilloscopes are given in Table 1.

Table 1.

Indices 1 2 31 – mass of the solution, which has passed through the generator , kg.0.7980.3760.2572 - temperature of solution at the input of the generator , degrees2020203 - temperature of the solution at the output of the generator , degrees3041504 - temperature difference of the solution , degrees1021305 - durability of the experiment , s3003003006 – KOH solution heat capacity with density of 1020 kg/m3, kJ/kg/degree*3.993.993.997 – energy of heated solution , kJ31.8430.0030.768 - reading of voltmeter , V6.06.06.08’ - readings of ACK-2022 oscilloscope , V2.942.942.948’’ - readings of PCS500A oscilloscope , V3.003.003.009 - reading of ammeter , A0.470.470.479’ - readings of ACK-2022 oscilloscope ’, A0.330.330.339’’ - readings of PCS500A oscilloscope ’’, A0.500.500.5010 - electric power consumption according to the readings of voltmeter and ammeter, , kJ0.850.850.8510’ - electric power consumption according to the readings of ACK-2022 oscilloscope , , kJ0.290.290.2910’’ - electric power consumption according to the readings of PCS500A oscilloscope, , kJ0.450.450.4510’’’ - electric power consumption for the total quantity of pulses (41400) per experiment (without taking into account pulse duty ratio), kJ36.1135.9835.4211 - COP of the cell according to the readings of voltmeter and ammeter, 37.4637.0636.1911’ - COP of the cell according to the readings of ACK-2022 oscilloscope, 109.8108.6106.111’’- COP of the cell according to the readings of PCS500A oscilloscope taking into account pulse duty ratio70.7570.0068.3611’’’ - COP of the cell according to the readings of PCS500A oscilloscope

without taking into account pulse duty ratio0.880.830.87
* Spravochnik chimika, izd. Chimia, M., L., 1964

Notes: PX120 multimeter, which is not given in the diagram (Fig. 3), according to the client's demand, indicated the figures of the changing values of voltage in the interval of 1 to 5 V, the values of current in the interval of 0.1 to 0.6 A and the values of power in the interval of 0.1-3.0 W. They were approximately the same values that originated from the readings of the voltmeter, the ammeter and two oscilloscopes.

Discussion of the Results

According to the representatives of the joint-stock company SITIS, power consumed by the cells should be determined in the following way. According to them, power of one pulse is equal to 300x50x0.00007=1.05 J. They have processed the oscillograms of several pulses with the help of a computer program, and they have got, as they think, more exact result of 0.87 J. Then quantity of pulses per experiment is determined: 300x139.7~41400. Taking this into consideration, power consumed by the cell during 300 s is 0.87x41400=35.98 kJ (p. 10''' of Table 1). According to them, pulse duty ratio should not be taken into consideration. It is natural that in this case energy effectiveness of the cell will be less than unit: 0.87 (p. 11''' of Table 1).

Besides the analysed cell efficiency calculation version, SITIS specialists have suggested one more. According to this version, pulse duty ratio should be taken into account only once. Then energy consumed by the cells will be 300x50x300/100=45.0 kJ. In this case, energy efficiency of the cell will be less than unit as well.

Let us consider physical sense of this method. Time period, within which energy is supplied into the cell, is equal to 0.00007x41400=3.0 s; the total time of its operation is 300 s. Thus, the cell received energy during 3 s, and it operated within 297 s receiving no energy. Taking it into account, it is possible to present the diagrams of the maximal and average values of current and voltage (Fig. 13). As it is clear, total time, within which the maximal values of voltage of 300 V and current of 50 A operated, is equal to 3 s. Their average values of 3 V and 0.5 A operated within 300 s.

Fig. 13. Operation time diagram of the maximal (300 V, 50A) and average (3.0 V, 0.5 A) values of voltage and current

The average values of voltage of 3.0 V and current of 0.5 A have been obtained as a result of division of their maximal values of 300 V and 50 A on pulse duty ratio 100. If we divide only voltage by duty ratio, and current is not divided, it means that when the average value of voltage is 3 V, the value of current will be 50 A within 300 s (Fig. 13, b). The instruments register nothing of the sort. This is the first apparent contradiction, which cannot be ignored.

The change intervals of voltage (1-5 V), current (0.1-0.6 A) and power (0.1-3.0 W) being indicated by the multimeter confirm the fact that this instrument registers pulse duty ratio, voltage and current. It is the second contradiction.

It is suggested in the textbook on pulse power engineering to determine power, which is consumed by the consumer in the form of pulses, according to the formula.

(1)

It appears from this that average values of voltage and current should be determined according to the formulas:

(2)
(3)

But the voltmeter being arranged before the cell indicated and the ammeter indicated . It is the third apparent contradiction that cannot be ignored.

Thus, maybe we are the first to come to an indefiniteness, which has been evaded by the investigators. The fact that power is a function of two variables (voltage and current) was ignored in order to get a result, which would match the law of conservation of energy. The readings of all instruments, which have been used by us in this experiment, are at variance with an unfounded requirement to take into account a change of one parameter (current or voltage) when determining electric energy consumed in the form of pulses.

In order to facilitate the process of analysis of the causes of different readings of the instruments installed before the pulse generator and after it, let us consider the diagram (Fig. 14) where there are the pulse forms 4 of rectified voltage and the pulse forms 5 sent by the pulse generator to the cell supply circuit. Voltage and current before the pulse generator 3 were registered during the experiment in addition to the data specified in Table 1. Voltage before the pulse generator was equal to circuit voltage. i.e. 220 V. The alternating current value was =0.60 A.

As it is shown in Fig. 10, average amplitude of voltage pulses was 300 V with the average value of voltage of 3.0 V, and the average amplitude of current pulses (Fig. 11) was 50 A by the average value of current of 0.5 A. Pulse duration was =0.00007 s with pulse ratio of =100 and duty ratio =0.01.

In accordance with the readings of the voltmeter, ammeter and both oscilloscopes, power at the input of the cell of the water electric generator of heat is =3x0.5=1.50 W on the average. Power consumption for solution heating is . Taking it into account, effectiveness is as follows: 31.0/0.45=68.9 (Table 1).

Fig. 14. Block diagram of measurement of electrical quantities: 1- cell; 2 – electronic oscilloscope; 3 – pulse generator

A question comes on: can the existing instruments installed before the pulse generator confirm this effectiveness?

Let us pay attention to the fact that ammeter installed before the pulse generator indicates =0.6 A, and voltmeter indicates =220 V (Fig. 13). As a result, power realized by the pulse generator

(3) and the cell (1) will be =220x0.60=132 W. In this case, energy effectiveness of the cell of the water electric generator of heat will be less than a unit (31000/300=103.3)/132=0.78 taking into account energy of the heated solution (Table 1, p.11’’’).

Thus, even if coefficient of performance of the pulse generator (3) is equal to a unit, the readings of the instruments installed before the pulse generator and after it vary nearly 132/1.5~90fold. A question comes on: what instruments give a result that corresponds to an actual energy consumption of the cell of the water electric generator of heat? The instruments installed before the pulse generator (3) or the instruments installed after it? Where is the essence of physics in the difference of these readings?

In order to give an answer to this question, let us examine physical processes that take place when voltage and current are measured before the pulse generator (3).

The readings of voltmeter installed before the pulse generator (3) are considerably greater than the readings of oscilloscope 2 and voltmeter installed before the cell (1). It takes place, because voltage before the pulse generator is always equal to circuit voltage of 220 V.

Let us pay attention to the fact that the pulses (4) of rectified voltage with total duration of 0.01 s are shown before the pulse generator (3) in Fig. 14. Here, the pulse (5) of voltage with duration of 0.00007 s is shown. The pulse generator separates it from the whole pulse and sends it to the cell. Strictly speaking, the remaining area under the curve of rectified pulse with voltage of 220 V should be decreased by a value corresponding to the area of the pulse being sent to the cell (1) and should become equal to voltage of 220-3=217 V. But this difference is compensated immediately by mains, and the above-mentioned area of the pulse with duration of 0.01 s is kept corresponding to voltage of 220 V.

Thus, any measuring instruments installed before the pulse generator (3) will register power nearly 90fold greater than the instruments installed before the cell (1). Now we know why. It is so, because the instruments before the pulse generator (3) refer current of 0.60 A not to average value of pulse voltage (3 V), but to the total voltage of the mains (220 V). This phenomenon can be observed in other experiments.

3. The Second Experiment

In order to simplify the experiment and its interpretation, let us take a diode as a pulse generator. It generates half-wave pulses of rectified current with frequency of 50 Hz and duration of 0.01 s. An incandescent lamp of 100 W was used as an energy consumer.

In order to facilitate the process of analysis, let us show voltage pulses before the diode and after it in the diagram (Fig. 15). Let us call the diagram a block diagram.

Voltage and current before the lamp (1) were determined with the help of two sets of instruments. Permanent-magnet instruments: M2004 voltmeter (), accuracy class 0.2 (GOST 8711-78), and M20015 ammeter (), accuracy class 0.2 (GOST 8711-60), and ACK-2022 electronic oscilloscope (2). Voltage () before the diode was measures with the help of the

multimeter. Current () was measured with the help of ACT-No. 88866 electromagnetic ammeter, accuracy class 0.5 (GOST 1845-52). Energy consumption was determined with the help of СО-И446 electric meter (GOST 6570-75). The measurement results are given in Table 2.

Fig. 15. Block diagram of measurement of energy consumed by lamp 1: 2 – oscilloscope; 3 – diode; 4 – voltage sinusoidal pulse form before the diode; 5 – voltage pulse form after the diode; and – ammeters: and – voltmeters

Table 2

Instruments and parameters /Without pulses/With pulses, 50 Hz1- voltmeter , V-1002- ammeter , A-0.233- power , W-23.0 4- voltmeter , V2202205- ammeter , A0.4550.236- power , W10050.67- luxmeter, lux 22006008- electric meter, W10051.3

If circuit voltage established with the help of a laboratory-scale autoconnected transformer is 200 V and power of the lamp is 100 W, current is 0.455 A, and illumination formed by it is 2200 lux (Table 2).

If the lamp is installed after the diode (3) (Fig. 15), illumination formed by it will be reduced up to 600 lux. Voltmeter installed before the lamp (1) after the diode (3) will indicated 100 V, and ammeter will indicate current 0.23 A. At the same time, voltmeter installed before the diode will indicate mains voltage of 220 V, and ammeter will indicate current 0.23 A.

Thus, according to the readings of the instruments installed before the lamp power realized by it is =100x0.23=23.0 W. At the same time, the instruments installed before the diode will register power realized by the lamp and the diode =220x0.23=50.6 W. What is the actual consumption of energy by the lamp?

It is possible to dispute the competence of the use of the permanent-magnet instruments: M2004 voltmeter (), accuracy grade 0.2 (GOST 8711-78), and M20015 ammeter (), accuracy grade 0.2 (GOST 8711-60). That's why let us replicate the readings of the above-mentioned instruments with the help of the readings of ACK-2022 electronic oscilloscope. In Figs 16 and 17, the oscillograms of voltage and current, which have been registered collaterally to the readings of the pointer instruments and , are given (Fig. 15).

Let us see what oscilligram processing methods (Figs 16 and 17) are closer to the readings of the voltmeter and the ammeter installed before the lamp. For this purpose, first of all let us determine parameters of one pulse gradually.

Pulse scale is 10. Average amplitude of voltage pulses (Fig. 16) is =7x5x10=350 V. Current magnitude was determined as voltage drop across the resistor with resistance of 0.3 Ohm. Taking it into consideration, average current amplitude (Fig. 17) is =6.6x0.005x10/0.3=1.1 A. Pulse repetition period is T=20 ms. Pulse duration is = 10 ms. Pulse frequency is =1000/20=50 Hz. Pulse ratio determined as a rate of pulse repetition period T to pulse duration is S=20/10=2.0.

Fig. 16. Voltage

Fig. 17. Current

If we allow some error, we accept a triangular form of pulses (). Duty factor will be Z=0.5/2.0=0.25. Average value of pulse voltage is =350x0.25=87.50 V. Average value of current in pulses is =1.1x0.25=0.275 A.

Let us pay attention to the fact that is pulse ratio corresponding to the triangular form of pulses. In this case, duty ratio of triangular pulses is (4). Taking it into account, average value of voltage will be , and average value of current will be . Power consumed by the lamp will be

(4)

Thus, voltage and current of the lamp arranged after the diode became twice as little, illumination was decreased (2200/600) = 3.7fold. That's why power consumed by the lamp should be decreased fourfold, it is confirmed by the formula (4). Double reduction of voltage and current with duty ratio equal to 2 means that when we determine average value of power, we should divide the product of the amplitude values of voltage and current twice by duty ratio as it is done in the formula (4). It will be actual power consumed by the lamp. The instruments being installed before the diode but will indicate twice greater power not because it is consumed by the lamp, but because in this part of network voltage (of network) is twice as much than voltage being supplied to the lamp; they have almost the same current.

Let us pay attention to the divergence between the readings of the voltmeter =100 V and the readings of the oscilloscope =87.50 V and the readings of the ammeter =0.23 A and =0.275 A according to the readings of the oscilloscope. These divergences are stipulated by the deviation of the voltage pulse form from the triangular form. The computer program based on the ordinate method would give more exact result. Nevertheless, power realized by the lamp will be =87.50x0.275=24.0 W according to the oscilloscope readings. This value will be =23.0 W according to the readings of the ammeter and the voltmeter installed before the lamp.

Not we can start searching a reply to the question: is it possible to realize the obtained efficiency of the cell of the water electric generator of heat or the lamp under the industrial and domestic conditions in order to save power?

As power grid is a closed system, current of 0.5 A of the cell (Fig. 14) or current of 0.23 A of the lamp (Fig. 15) will flow in this system (with voltage of 220 V) via all electric meters to a turbine of the generator of the power station. As a result, all meters register power consumed by the pulse generator (3) and the cell (1) jointly, i.e. 220x0.6=132 W (Fig. 14) or the lamp and the diode 220x0.23=50.6 W (Fig. 15). These are the properties of electric circuits. We'll get no power saving.

Thus, there are two contradictory results: indisputable power efficiency of the cell of the water electric generator of heat or the lamp and inability of power grid to accept this efficiency in order to save power. The main cause of this contradiction is in the fact that the cell or the lamp consume power in the form of the short-term pulses of voltage and current. There are no such pulses in power grid.

What will happen if we reject the electron generator of pulses and work out an electric power

generator, which will generate voltage in the form of pulses similar to those that are consumed by the cell (Fig. 4-9) or the lamp (Fig. 16, 17)? Certainly, such generator should have no electrical connection with the whole power grid. In this case, the powers being realized by the cell of 1.50 W or the lamp of 23.0 W will be on a shaft of such generator. If we connect this shaft with the shaft of an electric motor, which energizes the generator, the common shaft of the electric motor and the generator will give 1.50 W to the cell or 23 W to the lamp. Power consumed by the electric motor from the common grid, will be approximately the same (without taking the losses into consideration).

4. The Third (Direct) Experiment

The cell of the water electric generator of heat (Fig. 1) was used in order to carry out this experiment. The magnetic inductor 1302.3728 (GOST 3940-84) with the changed coil was used as a voltage pulse source. Voltage pulses were rectified and corrected. The magnetic inductor was rotated with the help of on-phase electric motor energized from mains. A domestic electric power meter was used in order to determine power consumed by the electric motor. Energy of the heated solution was determined in a standard way. The readings of the electric power meter 5 were doubled by the readings of the voltmeter and the ammeter arranged before the cell 1 as well as the readings of the oscilloscope 6 (Fig. 18).

Fig. 18. Electric diagram of the system: 1- cell: 2- electric motor; 3 – generator (magnetic inductor); 4 – coupling connecting the motor shaft with the generator shaft; 5 – electric power meter; 6 – oscilloscope

The electric motor shaft 2 is connected with the magnetic inductor shaft 3 with the help of coupling 4. Total power consumption is registered by electric power meter 5. Power consumed by the cell is registered with the help of voltmeter V, ammeter A and oscilloscope 6 (Fig. 18).

Certainly, the magnetic inductor does not generate such voltage pulses (Fig. 19), which provide significant energy effect (Figs 4…9). The magnetic inductor was adjusted in such a way that it generated voltage pulses, which average amplitude was equal to instead of 900…1000 V. Average amplitude of current pulse was equal to instead of 80…100 A. Pulse duration was instead of 100 μs. Pulse duty ratio was instead of 80…100. Besides, a pulse form differed from the necessary on (Fig. 19). Nevertheless, energy effect was registered.

The experimental method is simple. Solution consumption by the cell is determined. The electric motor, which makes the magnetic inductor rotate, is connected to the mains; it registers power consumed by the electric motor – magnetic inductor – cell system as well as the readings of the test instruments being arranged before the cell. Then the cell, which plays the role of a load, is de-energized. Energy consumption is registered during idle run of the electric motor- magnetic inductor system. A difference between these readings is equal to energy being consumed by the cell. Simultaneously, solution consumption and a change of its temperature are registered. In order to facilitate the analysis, consumed energy has been converted into power.

Fig. 19. Sample of an oscillogram of voltage and current generated by the magnetic inductor

The experimental results are given in Table 3. Here is power consumed by the cell from the mains. It is equal to a difference between the readings of the electric power meter when the load (the cell) is energized and de-energized. is heat power of the heated solution. is power being indicated by the voltmeter and the ammeter arranged before the cell. is power being indicated by the oscilloscope and determined manually. is an index of efficiency of the solution heating process.

Table 3. Indices of the direct experiment
Experiment No., W, W, W, W12456719.403.104.323.803.1029.803.534.45-2.77310.203.104.404.303.34411.304.805.104.802.35513.284.005.005.303.32

As it is clear, average power of = (4.3 …5.1) W being determined in accordance with the average values of current and voltage is close to power value of = (3.1….4.8) W on the electric motor shaft when the cell is energized (without taking power for idle run into consideration) and power of = (3.8….5.3)W being obtained while oscillogram processing. If we multiply power value being indicated by the voltmeter and the ammeter by duty ratio , it will correspond to a single registration of duty ratio, which is described in all textbook on power engineering and pulse engineering. In this case, the readings of the voltmeter, the ammeter and the oscilloscope will exceed the readings of the electric power meter 4.7 fold. It does not correspond to reality. It appears from this that when average power is determined according to an oscillogram, the amplitude values of voltage and current should be divided by duty ratio not once as it is mentioned in the textbooks, but twice as it is shown in the formula (4). Only such power value will correspond to reality.

CONCLUSION

We dare say that it is the first time when the such results (Table 3) are published. They will lay a foundation to carrying out similar experiments that will result in new pulse engineering. Vital parts of all living organisms consume electric power by pulses. It is the most saving way of the use of electric power.

References

1. Ph.M. Kanarev. The Foundation of Physchemistry of Micro World. The 6th edition. Krasnodar, 2005. 500 pages (In Russian).

Tariel KAPANADZE

Over-Unity Electric

Videos --

http://www.youtube.com/watch?v=wV560xfYSJ0

http://www.youtube.com/watch?v=90W00Yt_PLk

http://www.youtube.com/watch?v=YxFgAfSXNt8

http://www.youtube.com/watch?v=Be1H0aq5Iyc

http://www.youtube.com/watch?v=Mxa_G4X8Y7k

http://www.youtube.com/watch?v=W-7RfEF-2WI

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http://www.overunity.com/index.php?topic=7679
(June 27, 2009)

Self-running Free Energy Devices up to 5 KW from Tariel Kapanadze

Forcethetruth posted this video on Youtube that he got from a torrent somewhere:

http://www.youtube.com/watch?v=Mxa_G4X8Y7k

There are 7 parts to this video but the guys are lighting 5 large Edison based lightbulbs from a radiator buried in the ground, a wire to a water pipe, a Tesla coil/joule thief, a spark gap, and some other unidentified components.

We started discussing this in the Joule Thief topic but I wanted to give this its own area for discussion. We are looking for folks to help translate the narration in these videos.

These are well worth watching even not knowing the language spoken. It is really something to see. The other 6 parts of the video can be found on youtube in the sidebar on the right of the video. If someone wants me to post links to all of them here, I will.

Bill

See also :

http://peswiki.com/index.php/Directory:Kapanadze_Free_Energy_Generator

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http://v3.espacenet.com/publicationDetails/biblio?DB=EPODOC&adjacent=true&locale=en_EP&FT=D&date=20080828&CC=WO&NR=2008103130A1&KC=A1

WO 2008/103130

Energy Transformer

Abstract -- Energy transformer being improved with this invention, transforms the initial electric energy received from an independent power supply (1, 2, 2A) and comprises the following parts: - First part consists of an accumulator or chargeable battery, or an inverter or network or any other power supply (1, 2 and 2A) to provide the input energy to the system, - Second part consists of power switch (3), frequency generator (4), capacitor (5), first filter (6), and primary coil (7), - Third part consists of secondary coil (8), current amplifier (9), second filter (10), frequency adjuster (11) and phase stabilizer (12) and load (13), and - The cables (14 and 15) which connect the output (13) on the secondary side to the power switch (3).

Background of the Invention

The present invention is related with an economic energy transformer, which primes the constant electric energy received from any pwoer supply via transferring the electromagnetic field occurred at one of the bobbins to other bobbin, rhytmically stabilizing the magnetic field between the bobbins with the help of amplifier immobilizes the energy voltage in both bobbins, increasing the current with respect to the input current.

Prior Art About The Invention

There is not encountered any application in prior art related with the invention improved with this invention.

Aims for Development of the Invention

The economical energy transformer improved with this invention aims to receive a constant energy and fixing the voltage of this energy, increase the current value, in other words to produce more amount of energy than the received energy.

General Description of the Invention

The key feature of the economical energy transformer improved with this invention is to receive the electric energy having constant voltage and current value and emit this energy with constant voltage but higher current value. This device can also feed the initial power supply.

The economical energy transformer improved with this invention has to receive energy from a power supply constantly. This mentioned energy can be easily generated from a small accumulator or chargeable battery or an inverter or a network or any similar power supply.

The economical energy transformer improved increasingly emits the energy that is received

constantly.

Description of the Figures

The figures prepared for a better explanation of the economical energy transformer improved with this invention are disclosed. Description of the figures is as follows;

Figure 1 -- The view of circuit chart of the economical energy transformer.

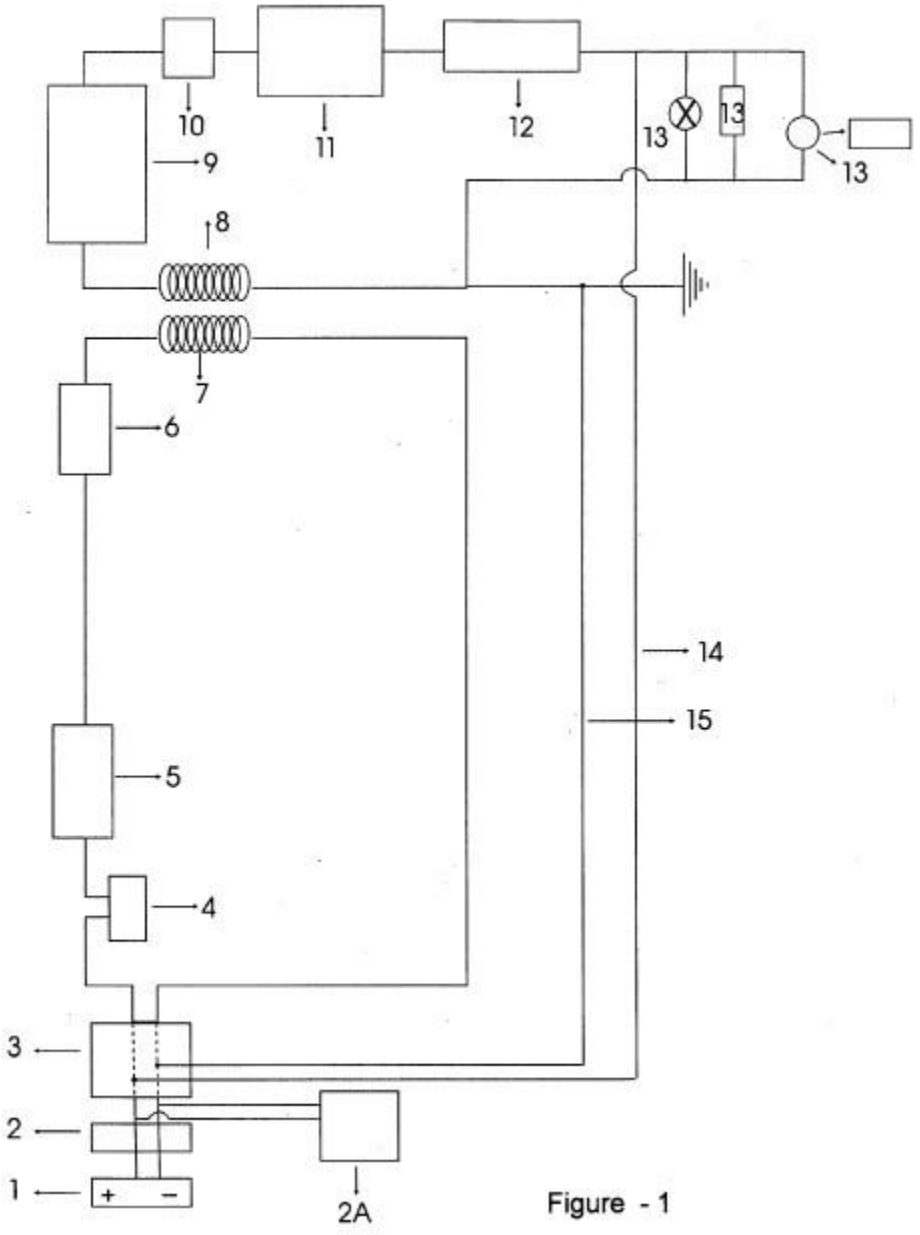

Figure - 1

Definition of the Components (Parts-Features) on the Figures

The parts shown on the figures are numbered individually for a better explanation of the

economical energy transformer improved with this invention. Explanation of each part (feature) numbered is given as follows;

1, 2, and 2A -- Initial energy (Battery, inverter, city network, accumulator, etc., depending on the initial power supply.)

3 -- Power switch

4 -- Main Board

5 -- Capacitor

6 -- First filter

7 -- First bobbin

8 -- Second bobbin

9 -- Current Amplifier

10 -- Second filter

11 -- Frequency Adjuster

12 -- Stabilizer (phase)

13 -- Output (load)

14 and 15 -- Energy cables to feed the first circuit with the energy generated.

Description of the Invention

The economical energy transformer improved with this invention includes 4 main part inside;

First Part consists of an accumulator or chargeable battery, or an inverter or network or any other power supply (1, 2, and 2A) to provide the input energy to the system.

Second part consists of power switch (3), main board (4), capacitor (5), first filter (6), and first bobbin (7).

Third part of second bobbin (8), current amplifier (9), second filter (10), frequency adjuster (11) and stabilizer (phase) 912) and output (load) adjuster (13).

And the fourth part consists of the cables (14 and 15) which provide the energy generated to be transferred to the first part and by this way feeds the input power supply where necessary.

Second part is designed to transfer the electric energy -- which is received from the independent power supply at the first part- and electromagnetic field -- which is occurred at the first bobbin (7) -- to the second bobbin (8).

And at the third part, due to the high magnetic field received from the first bobbin (7) there occurs a difference between the bobbins and this difference occurred between the second bobbin (8) and first bobbin (7) is increased by the current amplifier (9) at this part.

Through the energy cables (14 and 15) connected to the output (load)(13) of the economical energy transformer improved with this invention and feeding the first circuit, the device feeds itself by using some part of the energy it generated.

The present invention is designed as single phase and it is possible to increase the number of the phases at maximum three phase. It is possible to generate energy at any desired power value. Depending on the electric energy value (power), the capacities of the parts used in the device shall be increased symmetrically.

The energy to feed the system is received from an accumulator or chargeable battery, or an inverter or network or any other power supply (1, 2 and 2A). This energy input has a constant voltage and current value.

Opening the power switch (3), the user gives the electric energy received from the initial energy (1, 2, 2A) to the first second part. being loaded with the electric energy received from the energy supply (1, 2, 2A) the capacitor (5) serves as a pump, and provides the main board (4) to give electric to the system.

Main Board (4) transfers the high amount of frequency it generated to the first filter (6). First filter (6) stabilizes the frequency received from the main board (4) and regularly transfers to the first bobbin (7).

Creating a magnetic field around itself with the high frequency regularly received from the first filter (6); first bobbin (7) transfers it to the second bobbin (8).

Subsequently, following the system, high frequency passing from the first bobbin (7) passes to the current amplifier (9). Second filter (10) transfers the high frequency received to the high frequency adjuster (11). The energy emitted from this part passes to the stabilizer (12) and the relevant unit stabilizes the received high frequency in accordance with the need and arranges without causing any harm to the parts at its exit. Some part of the energy generated by the device is used to feed the energy cables (14 and 15) feeding the first circuit and the power supply where this power supply needs to be recharged.

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http://v3.espacenet.com/publicationDetails/biblio?DB=EPODOC&adjacent=true&locale=en_EP&FT=D&date=20080828&CC=WO&NR=2008103129A1&KC=A1

WO 2008 / 103129

Independent Energy Device

Abstract -- The independent energy device improved with this invention, starts operation with the initial electric energy received from the initial energy supply (15) and afterwards generates energy consistently and is characterized to include power switch (1), capacitor (2), points (3), high frequency generator (4), first filter (5), first bobbin (6), first frequency adjuster (7), second filter (8), frequency stabilizer (adjuster) (9), second bobbin (10), second frequency adjuster (11), exit (phase) (positive) (12), positive self feeding cable (12a), exit (neutral) (13), negative self feeding cable (13a), neutral (grounding) (14), initial power supply (15).

Description of the Invention

The present invention is a device both self sufficient (self-feeding) and producing ready to use electric energy, starts to operate with the initial electrical energy received from accumulator or similar source of energy, transferring the magnetic field generated in first bobbin to second bobbin through a frequency stabilizer, after rhythmically stabilizing the magnetic field occurred between the bobbons; converts the independent energy -- received by the second bobbin from the air -- to electric energy.

Today electric energy can be generated by using various kinds of technologies. in order to summarize some of them; electric energy can be generated through dams, from the motion of waves, by nuclear power plants, by using solar energy, fuel oil, hydroelectric power plants and similar areas through using various technologies. There are different advantages and disadvantages among these various techniques used for generating electric energy. The general purpose of all these techniques is to generate energy cheaper and faster by providing high efficiency.

The present invention is improved through using different technologies of today, by less costly way and without harming the nature, and using a very different technique from the above mentioned (present techniques used today).

The present invention receives energy externally only at first starting phase. This mentioned energy can be easily generated from a small accumulator or chargeable battery or similar sources. 1-2 seconds after the device is started, the power switch at the energy input of the device cuts the external electric (from accumulator or similar source of energy) off by generating electric energy. A very small part of this electric energy generated is used by the device to feed itself and the most part is discharged ready to be used. As long as the device is not shut down or no problem occurred inside, the device generates energy consistently. By recent technology, there is no device similar to the present invention producing energy consistently by feeding itself.

In order to maintain the device to generate electric energy consistently, two circuits are designed inside the device.

First circuit, consists of time relay switch, capacitor, points, high frequency generator, first filter, first bobbin, first frequency adjuster (this circuit is displayed with bold line in the figure).

Second circuit; consists of second filter, frequency stabilizer, second bobbin, second frequency adjuster.

First circuit is designed for generating electricity by transferring the electromagnetic field occurred at the first bobbin with the electric energy received from the independent initial power supply, to second bobbin. And as the second circuit; Due to the high magnetic field received from the first bobbin, there occurs a magnetic field difference between the bobbins. The magnetic field difference occurred between the second bobbin and first bobbin stabilized by the help of frequency stabilizer, this circuit lione also converts the energy which is moving independently in the air at the second bobbin designed within this line to electric energy. This electric energy formed by the second bobbin adjusts the necessary frequency (220 V - 50 Hz or 110 V - 60 hz) for use, by the help of second frequency adjuster designed at the bobbin output. This generated electric energy is transferred to the intended usage area via exit points. Through the circuit cables connected to the exit points, the device feeds itself with teh generated electric energy. This mentioned process eventuates 1-2 seconds after the device is started. After this process, the time relay power switch designed at the input of the device breaks the initial power supply. After this stage, the device generates the energy independently.

The present invention is designed as single phase and as the phase number is desires to be increased, the bobbin number shall also be increased for each phase. Depending on the number of bobbins, the capacities of other parts used in the device are increased symmetrically.

It is possible to obtain energy in desired amounts of KW from the device. it is necessary to increase the capacity of the parts depending on the value of the electric energy.

The figures related to the invention are given enclosed, from the related figures:

Figure 1 -- Schematic view of the present invention.

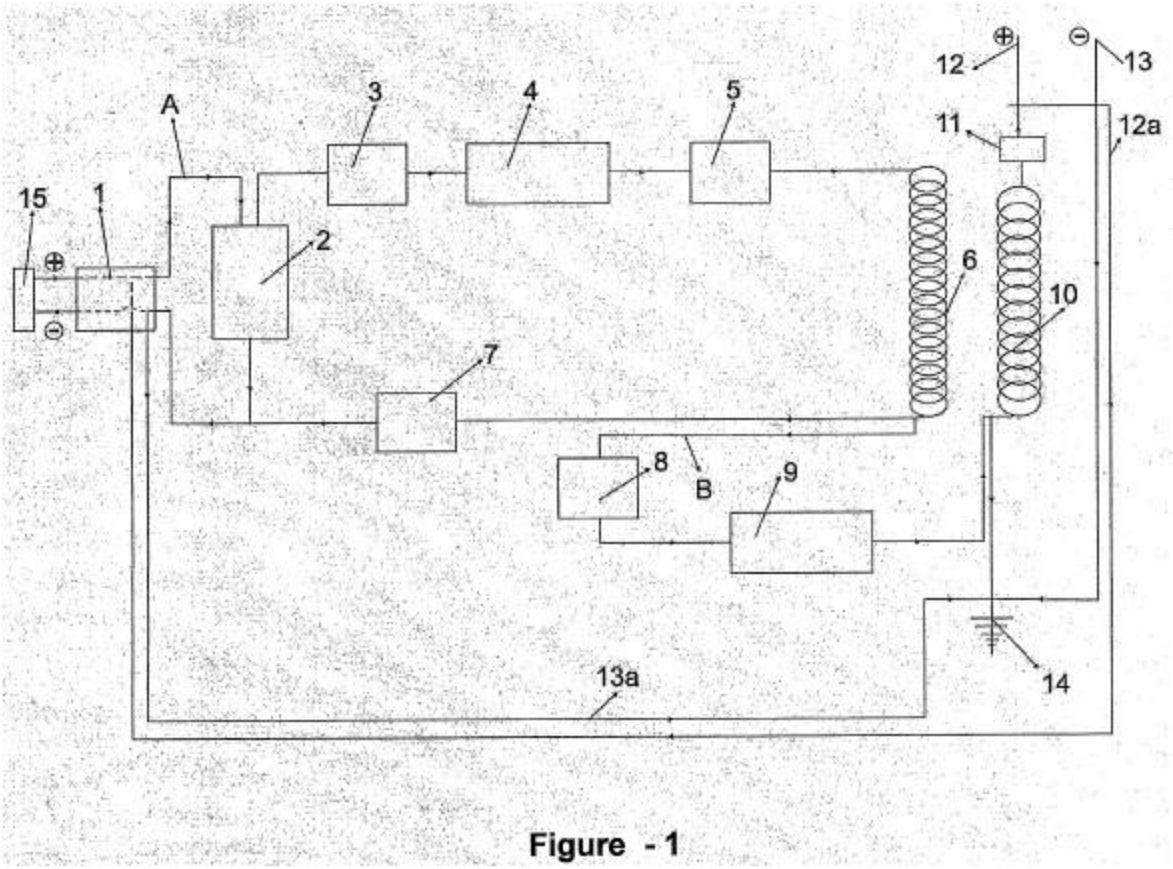

Figure - 1

The parts related to the invention are given numbers and the explanations corresponding to these numbers are as follows:

1 -- Power switch

2 -- Capacitor

3 -- Points (as distributor of an engine)

4 -- High frequency generator

5 -- First filter

6 -- First bobbin

7 -- First frequency adjuster

8 -- Second filter

9 -- Frequency stabilizer (adjuster)

10 -- Second bobbin

11 -- Second frequency adjuster

12 -- Exit (phase) (positive)

13 -- Exit (neutral)

13a -- Negative transformation cable

14 -- Neutral (ground)

15 -- Initial power supply

A -- First circuit cable

B -- Second circuit cable

The operation of the present device is explained as below, giving reference to the parts numbers through the figure enclosed.

Energy and Frequency Circuit on the First Circuit (A)

Opening the power switch, the user gives the electric energy received from the initial energy supply (15) to the first circuit cable (A). Being loaded with the electric energy received from the energy supply (15) the capacitor (2) serves as a pump, and provides the points (3) to give electricity to the high frequency generator (4). High frequency generator (4) transfers the high amount of frequency it generated to the first filter (5). First filter (5) stabilizes the frequency received from the high frequency generator (4) and regularly transfers to the first bobbin (6). Creating a magnetic field around itself with the high frequency regularly received from the first filter (5); first bobbin (6) transfers it to the second bobbin (10). Subsequently, following the first circuit cable (A), the high frequency passing from the first bobbin (6) passes to the first frequency adjuster (7). The first frequency adjuster (7) stabilizes the received high frequency in accordance with the need and arranges without causeing any harm to the parts at its exit.

Energy and Frequency Circuit on the Second Circuit (B)

The high frequency rising from the first bobbin (6) enters the second filter through the second circuit (B). Second filter (8) transfers the frequency received from the first bobbin (6) to the frequency stabilizer (9). The electromagnetic fields occurring at the bobbins (6, 10) are different and the magnetic field at the first bobbin (6) is higher than the second bobbin (10). At this stage the frequency stabilizer (9) stabilises the different electromagnetic fields occuring at the first and second bobbins (6, 10). This stabilized high frequency exits from the second bobbin (10) and is adjusted for the required (necessary for the use) frequency degree by the help of the second frequency adjuster (11). The user uses the electric energy generated in the device by the help of exit (phase) (positive) (12) and exit (neutral) cable (13).

The positive transformation cable (12A) at the exit of the device and the negative transformation cable (13A) are connected to the power switch. 1-2 seconds after the device starts to generate electricity, the electric energy generated is transmitted to the power switch (1) via positive transformation cable (12A) and negative transformation cable (13A). The time relay at the power switch (1) breaks the energy received from the initial power supply (15). After this stage, the device continues to generate electric energy feeding itself with the self-generated energy and independently without depending on any energy from outside. The device continues to generate unlimited energy as long as it is not closed via the power switch (1) or no problem occurs within the system.

Vasilesco KARPEN

Electric Pile

Vasilesco Karpen

Google "Vasile Karpen", and you'll find thousands of this:

"Built by Vasile Karpen, the pile has been working uninterrupted for 60 years..."

Here is is again, PLUS his French Patent (erroneously reported as being patented in 1922 -- actually, it was 1924...

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http://uk.ibtimes.com/articles/20101227/karpen-039pilebattery-produces-energy-continuously-since-1950-exists-romanian-museum.htm
27 December 2010

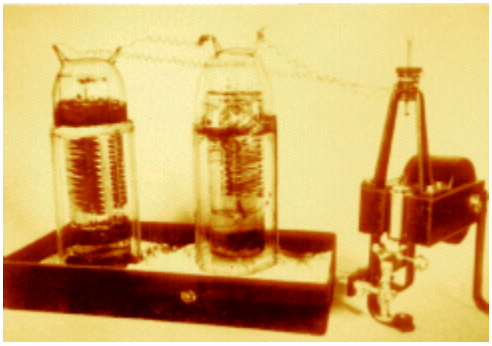
Karpen's Pile: A Battery That Produces Energy Continuously Since 1950 Exists in Romanian Museum

by

Ovidiu Sandru

The "Dimitrie Leonida" National Technical Museum from Romania hosts a weird kind of battery. Built by Vasile Karpen, the pile has been working uninterrupted for 60 years. "I admit it's also hard for me to advance the idea of an overunity generator without sounding ridiculous, even if the object exists," says Nicolae Diaconescu, engineer and director of the museum.

An old photo of Karpen's pile



The invention cannot be exposed because the museum doesn't have enough money to buy the security system necessary for such an exhibit.

Half a century ago, the pile's inventor had said it will work forever, and so far it looks like he was right. Karpen's perpetual motion machine now sits secured right in the director's office. It has been called "the uniform-temperature thermoelectric pile," and the first prototype has been built in the 1950s. Although it should have stopped working decades ago, it didn't.

The scientists can't explain how the contraption, patented in 1922, works. The fact that still puzzles them is how a man of such a scientific stature such as Karpen's could have started building something "that crazy."

The prototype has been assembled in 1950 and consists of two series-connected electric piles moving a small galvanometric motor. The motor moves a blade that is connected to a switch. With every half rotation, the blade opens the circuit and closes it at the the start of the second half. The blade's rotation time had been calculated so that the piles have time to recharge and that they can rebuild their polarity during the time that the circuit is open.

The purpose of the motor and the blades was to show that the piles actually generate electricity, but they're not needed anymore, since current technology allows us to measure all the parameters and outline all of them in a more proper way.

A Romanian newspaper, ZIUA (The Day), went to the museum for an interview with director Diaconescu. He took the system our of its secured shelf and allowed the specialists to measure its output with a digital multimeter. This happened on Feb. 27, 2006, and the batteries had indicated the same 1 Volt as back in 1950.

They had mentioned that "unlike the lessons they teach you in the 7th grade physics class, the 'Karpen's Pile' has one of its electrodes made of gold, the other of platinum, and the electrolyte (the liquid that the two electrodes are immersed in), is high-purity sulfuric acid." Karpen's device could be scaled up to harvest more power, adds Diaconescu.

Karpen's battery had been exhibited in several scientific conferences in Paris, Bucharest and Bologna, Italy, where its construction had been explained widely. Researchers from the University of Brasov and the Polytechnic University of Bucharest in Romania have even performed special studies on the battery, but didn't pull a clear conclusion.

"The French showed themselves very interested by this patrimonial object in the 70s, and wanted to take it. Our museum has been able to keep it, though. As time passed, the fact that the battery doesn't stop producing energy is more and more clear, giving birth to the legend of a perpetual motion machine."

Some scientists say the device works by transforming thermal energy into mechanical work, but Diaconescu doesn't subscribe to this theory.

According to some who studied Karpen's theoretical work, the pile he invented defies the second principle of thermodynamics (referring to the transformation of thermal energy into mechanical work), and this makes it a second-degree perpetual motion machine. Others say it doesn't, being merely a generalization to the law, and an application of zero point energy.

If Karpen was right, and the principle is 100% correct, it would revolutionize all of the physics theories from the bottom up, with hard to imagine consequences. Though I guess this isn't going to happen very soon, the museum still needs proper private funding to acquire the necessary

security equipment required by the police to exhibit the device.

Build your free energy device, with off-the-shelf components you can purchase cheaply. Basically, what it does is extracting energy out of radio waves. More information is available @

http://www.greenoptimistic.com/teslas-secret-unveiled.

The so-called "Tesla Secrets" being touted of late are anything but that. It is a pathetic regurgitated ripoff of Joe Tate's expired patent for the "Ambient Power Module". Tesla my gluteii...

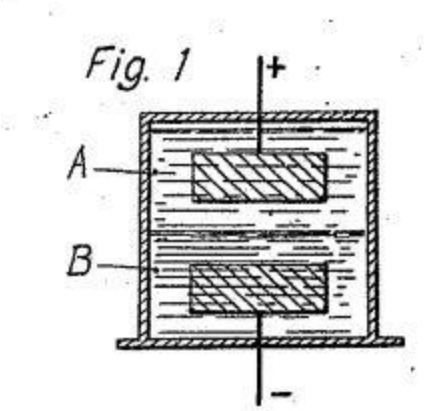
See also -- Joe TATE : Ambient Power Module

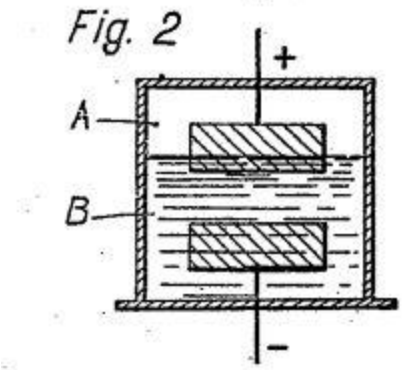
And : JACQUES' Coal Battery

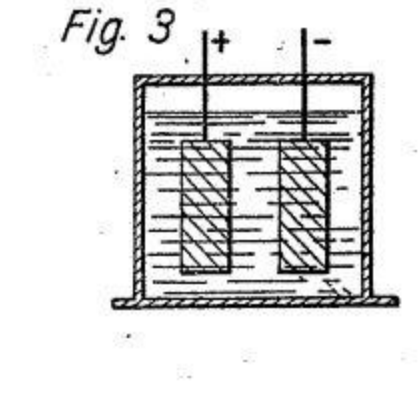
FR577087
Pile électrique

[Thermoelectric Battery]

EC: H01M6/00; Y02E60/12
IPC: H01M6/00; H01M6/00
1924-08-30







Pile électrique. L'objet de la présente invention est une pile électrique transformant la chaleur du milieu ambiant en énergie électrique. Cette pile est formée, soit de deux. phases liquides, soit l'une phase liquide et d'une phase gazeuse, les deux phases étant en contact, mais n'étant pas miscibles, soit enfin d'une seule phase liquide; et de deux électrodes en métal ou en charbon en contact avec les phases. Les électrodes sont, dans tous les cas, inattaquables par les liquides ou les gaz:avec lesquels elles sn trouvent en contact, leur poids et leur na ture restent invariables pendant le repos et le fonctionnement de la pile, différant en cela de toutes les piles connues. Il en est de même des différentes phases liquides ou gazeuses de la pile, lesquelles resténf égaiement invariablés, aucune réaction chimique ne seproduisant entre les éléments de la pile phases et electrodes.

Les figures annexées de i â 3 indiquent des formes diverses de réalisation de la pile, objet de

l'invention.

La figure 1 représente une pile formée de deux phases liquides A et B, les électrodes étant complètement immergées l'une dans la phase A, l'autre dans la phase B.

Exemple se rapportant â la figure 2. Les phases A et B résultant d'un mélange d'eau, d'alcool amylique et d'hydroxyde de sodium, mélange qui se sépare, â l'équilibre, en deux phases; la phase B surtout aqueuse, la phase A surtout alcoolique. Les électrodes sont en charbon ou en platine. La force électromotrive, dirigée, â l'extérieur, de A vers B est, â la température de la chambre, d'environ 0,4- voit. La figure n représente une pile dans la quelle l'une des phases est liquide et l'autre phase est liquide ou gazeuse. L'une des electrodes est en partie immersed dans l'une des phases, en partie dans l'autre phase, la deuxième électrode est complètement im mergée dans l'une des phases.

Exemple se rapportant â la figure 3. La phase B est formée d'une solution- aqueuse d'hydroxyde de sodium, la phase A est formée d'air et de vapeurs- de B ou de benzine. Les électrodes sont en platine, en nickel ou en charbon. La force électromotrice dirigée, â l'extérieur, de À vers B est; â la température de la chambre, comprise entre o,4 et o,8 voit.

La figure 3 représente une pile formée d'un seul liquide, dans lequel se trouvent deux électrodes différentes.

Exemple se rapportant â la figure 3. Le liquide est formé d'eau rendue bonne con ductrice de l'électricity par un sel alcalin, par exemple le carbonate de sodium, et les electrodes sont formées : soit de deux métaux dif férents comme le platine et le nickel, soit d'une électrode métallique et d'une autre electrode en charbon, soit encore d'une électrode en charbon et d'une autre électrode toujours en charbon, mais de qualite différente, par exemple, une électrode en graphite et l'autre en charbon de cornue ou une électrode en charbon de bois et l'autre en charbon de cornue, etc. Les électrodes peuvent être mas sives ou formées de poudres contenues dans. des sacs, ou des vases poreux, etc. La force électromotrice est comprise entre o, & et 0,8 voit.

Dans tous les modes d'exécution de la presente pile, les phases sont en équilibre chimique; aucune réaction n'a lieu entre les phases en contact, il ne se produit aucune va riation de la concentration des phases, comme c'est le cas pendant le fonctionnement des piles de concentration connues. Aucun changement n'intervient non plus dans le poids ou la nature des electrodes. La pile se refroidit, pendant le fonctionment, sous la tempéra ture du milieu ambiant, lequel peut être un milieu naturel que Pair, Peau, la terre, etc., et reçoit de ce milieu la chaleur équivalente â l'énergie électrique développed.

'Les piles connues de concentration, emp aussi au milieu extérieur la chaleur équivalente à l'énergie électrique produite, mais pendant le fonctionnement de ces piles les concentrations de l'électrolyte autour des électrodes, tendent â s'égaliser et la force électromotrice de ces piles finit par s'annuler; la quantité d' electricite fournie est limitée. Au contraire, dans la présenté pile, les concentrations des phases en contact avec les electrodes se maintiennent invariables, la quantity d'électricité que cette pile peut débiter n' est limitée. Gette pile transforme indéfiniment la chàieur du milieu ambiant en energie electric, elle contredit donc 3rd deuxième princïpé, de la

thermodynamique.

"Translation" :

Electrical Pile -- The object of the present invention is an electrical pile transformer of heat of the ambient medium into electrical energy [thermoelectric battery]. This pile is formed, is two liquid phases, either the one liquid phase and of a gas phase, the two phases being in contact, but not being miscible, is finally of only one liquid phase; and of two electrodes in metal or out of coal in contact with them phases. The electrodes are, in all the cases, unattackable by liquid or gas with which they find contact, their weight and their nature remain invariable during the rest and the operation of the stack, differing in that from all other known piles...

Figures 1, 2, and 3 indicate the various shapes of performing of the pile, object of the invention.

The figure I represents a formed stack of two phases, liquides A and B, the electrodes being completely submerged one in phase A, the other in the phase B.

Example referring to Figure 1. Phases A and B resulting of a **mixture of water, of amyl alcohol and sodium hydroxide**, mixture which separates, t equilibrium, in two phases; the especially aqueous phase B, phase A especially alcoholic. **The electrodes are out of coal or platinum**. The force electromotor coach, directed at the outer one, of A towards B is at room temperature, of approximately 0,4 - sees. appear N represents a stack in it which one of the phases is liquid and the other phase is liquid or gaseous. One of electrodes is partly submerged in one of the phases in part in the other phase, second electrode is completely immersed in one of the phases.

Example referring to Figure 2 -- The phase B is formed of an aqueous solution of **sodium hydroxide**, phase A is formed of **air and vapors of benzene**. The electrodes are out of **platinum, in nickel or out of coal**. The directed electromotive force at the outer one, towards B is a temperature chamber, included enters O, 4 and O, 8 see.

Figure 3 represents a formed stack of only one liquid, in which two electrodes are different.

Example referring to figure 3. - The liquid one is formed of water made a good conductor of the electricity by an alkaline salt, for example the sodium carbonate, and the electrodes are formed either of two different metals like platinum and nickel, or of a metal electrode and another coal electrode, an electrode out of coal and of another coal electrode always, but of quality different, by example, an electrode of graphite and the other out of retort carbon or a wood coal electrode and the other out of retort carbon, etc. The electrodes can be powders contained in porous bags, or vases, etc The electromotive force enters O, & and 0,8.

In all the preferred modes of operation: stack, the phases are in chemical equilibrium ; no reaction enters the phases in contact, producing no generation of the concentration of the phases, as it is the case the operation with the known concnetrating piles. No changes intervene either in the weight or the nature of the electrodes. The stack cools, while it functions, under moderated action of ambient medium, which can be a natural medium, and receive from it heat equivalent to energy electrical developed.

Thermopiles of concentration, also employing the ambient medium heat have produced electrical energy, but during the operation of these piles, concentrations of the electrolyte around the electrodes equalize and the electromotive force of these piles cancel themselves; the supplied quantity of electricity is limited. To the contrary, in the present pile, the concentrations of the phases in contact with the electrodes remain invariable, and the quantity of electricity that this stack can output laughed is unlimited. This stack transforms indefinitely the heat of the ambient medium into electric energy, despite the second principle of thermodynamic.

Norman L. KELLOGG

Photon-Proton Electric Generator

[Thanks to Pierre St. Martin for sharing this information]

***Long Beach Independent* (Monday, December 23, 1974)**

OC Man says Generator Answer to Energy Needs

Story & Photo by

Bob GEIVET

This photon-proton DC plasma generator is the first building block and lab device that will eventually create a small system of power development that can solve at full swope [sic] a host of world dilemmas, save the environment of planet earth and free mankind from energy needs, pollution, war, slavery and starvation. I have given to the world a heavenly gift for all people. – Norman L. Kellogg, USA.

Norman L. Kellogg of Garden Grove says he has developed a self-energizing generator capable of the perpetual production of electricity through an ingenious application of Tesla theory alignment of protons and photons.

He says the module he has made will fit into the ordinary bread box, service panel or electric meter nest in the average residence and could produce enough electrocity to provide all its needs.

Kellogg described it as a photon-proton plasma engine, or generator, which he said could produce at least 100 kilowatts of direct current electricity, which in turn could be converted to alternating current power --- the kind used worldwide --- through a rectifier.

He envisioned that it could be developed to such refinement that it would be transportable to an automobile, plane, boat, mobile home, mountain cabin or farm to pump water and perform other chores.

It would produce so much energy that man could purify his water, air and total environment, Kellogg declared, as well as supply his own needs.

In short, he said, it could guarantee mankind's survival in a world increasingly short of energy sources and raw materials.

Kellogg warned that the world must find new ways to supply its needs, or mankind will perish. He said he thinks his self-energizing generator may be the answer, bu he conceded the need for refinements.

The Kellogg device is fueled by a one-time charge of radon gas in a closed-circuit system and by another system through which is pumped liquid hydrogen.

“Generation of electricity will be accomplished by the impingement of a specifically aligned field force on a similarly aligned conductive material such as copper”, Kellogg explained.

He said the generator would never need recharging, would last indefinitely and would never get hot like other conventional generators.

It has no moving parts, only the subatomic particles are in constant, quiet and undetectable motion, capable of generating electricity in direct proportion to the designed output size of the static generator, he said.

The first physical unit was made for Kellogg by Pre-Val Co., Inc., of Garden Grove, a high-precision machine shop that also makes space components.

Kellogg, who set up a so-called “think center” for engineers, physicists, researchers, and other scientists, said he expects to refine the first module and hopes to interest universities, colleges and high schools in tackling the same goal.

Kellogg said he developed the generator as “a humanity concept for out planet”, wants “not one cent of return”, and offered it to the United Nations to benefit the world’s inhabitants.

He explained that Dr Nikola Tesla, the world-renowned physicist, had predicted at the turn of the century that there must be a breakthrough to solve the world’s energy needs.

Tesla, who invented and developed the alternating current (AC) meter, the practical transmission of electric power and the fundamental principle of radio, said at that time:

“Ere many generations pass, out machinery will be driven by power obtainable at any point in the universe. Is this energy static or kinetic? If static, our hopes are in vain; if kinetic (and this we know for certain), then it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature”, which he described as “a source so practical that the machinery to harness it will last for 500 years and so basic that it will undo existing theories.

“The initial costs will be relatively big. After that, hardly anything and unlimited power for the asking”.

Keith KENYON

Alternator-Generator-Motor

Iron-free alternator-generator-AC/DC motor: 125% efficiency claimed and demonstrated; 5 articles, 3 patents.

[Click photos to enlarge]

Valley News (Date unknown; page 10, sect. 1)
Ray Rifkin : "Energy Generator that 'controls lightning unveiled"

Los Angeles Times (Friday, March 23,1979)
Robert Gillette : "Scientist Takes on Einstein"

... ...

Southern Tulare County Shopper / Pixley Enterprise & Terra Bella News (24 March 1979, pp. 1, 10)

... ...

Dr Keith Kenyon : ***Energy : Triumph or Tragedy ?***

0 ... Contents // 1 ... Introduction // 2 ... // 3 ... //

4 ... // 5 ... // 6 ... // 7 ... // 8 ... //

9 ... // 10 ... // 11 ... // 12 ... // 13 ... //

14 ... // 15 ... // 16 ... // 17 ... // 18 ... //

19 ... // **20 ...** // **21 ...** // **22 ...** // **23 ...** //

24 ... // **25 ...** // **26 ...** // **27 ...** //

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US4438342
Novel Hybrid Electric Vehicle

1984-03-20
Classification: - international: B60K6/442; B60K6/52; B60L11/12; B60K6/00; B60L11/02; (IPC1-7): B60L11/12 - European: B60K6/442; B60K6/52; B60L11/12

Abstract -- By utilizing, in a hybrid (electrical-heat engine) vehicle an alternator which is totally free of elemental iron in its magnetic circuit, the alternator (with appropriate rectification means) can be connected, selectively, in series, parallel or in lieu of the storage battery pack for activating the electrical motor which drives the wheels of the vehicle or any other load mechanically coupled to the electrical motor. Quick surges of power can thus be delivered to the load to achieve, for example, rapid acceleration of a vehicle.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to sources of driving power for mechanical loads and, more specifically, to hybrid-drive vehicles.

2. Prior Art

With the advent of the shortage of oil and the rapidly escalating price of it, associated with the economic and international dangers with which this deplorable situation has confronted the world, new types of transportation systems have been proposed. Amongst these is advocated the widespread use of electric cars, since these can utilize any type of fuel, wind, solar, synthetic fuels, coal, water power, hydrogen and nuclear power, for example. Anything that can be used to generate electricity can provide power for electric vehicles. Unfortunately batteries now and in the forseeable future are too heavy to provide much range or performance for electric vehicles. To rectify this situation, the United States Department of Energy has proposed that hybrid vehicles (battery-powered drive train plus a heat-engine-powered drive train), be the interim solution. There are two types of such vehicles, the first being a series hybrid, of which the diesel-electric locomotive is an example. In the series hybrid, a heat engine, usually of the internal combustion type, drives the electric generator powering the electric motors coupled to the wheels. The generator is, in actuality, an electric transmission. The other type is the parallel hybrid in which there is a battery-pack-powered electric drive coupled to the wheels, and in addition there is a heat engine, usually of the internal combustion type, also coupled to the wheels. Usually both drives in a parallel hybrid are coupled to the same set of wheels, but it is possible to have one drive coupled to one set of wheels and the other coupled to another set. When the electric drive is operating in a parallel hybrid, it is desirable to disconnect the heat engine when it is not being used, to avoid high friction losses. On the other hand when the heat engine alone is operating the vehicle, it is not necessary to disconnect the electric drive motor's rotor, since the friction loss is small, and it has the advantage of acting as a flywheel.

Such exhalted scientific organizations as Jet Propulsion Laboratory and its parent, the National Aeronautics and Space Administration, have dismissed the idea of a series hybrid as being too inefficient. To quote Briggs & Stratton engineers, who have developed an effective hybrid using their small 18 horsepower engine, "the first--and simplest--method (to build a hybrid) is to add an engine-driven generator to the electric motor to recharge its batteries. This design adds nothing to the electric motor's performance, only its range, and suffers significant mechanical-electrical-mechanical conversion losses. In short, the series approach is deemed by engineers to be an inefficient one."

The same argument has been used by JPL engineers to describe the use of an electric generator to drive the electric motor as is done with the diesel-electric locomotive. Another detracting argument is that such a generator would be much too heavy for an automobile. Earnest H. Wakefield, in his book, The Consumer's Electric Car, states that a series wound electric motor is capable of being used as a transmission without gearing because of its ability to increase its torque by the square of the current increase. Thus, an electric transmission (or series hybrid) can be more efficient than a standard transmission at lower speed range by reducing the large low speed losses. To a lesser extent this argument holds true with a shunt wound motor or even a conventional permanent magnet motor. Even JPL and Briggs & Stratton agree that the electric motor can be an effective and efficient method to start an automobile, especially if it is a series wound D.C. motor. Briggs & Stratton is quoted as saying its "hybrid gasoline-electric powered car takes advantage of the complementary characteristics of its two powerplants--the low speed power of the electric motor and the high speed performance of the gasoline engine." So we have a complementary situation. A series hybrid would be very useful and efficient in low speed city

driving, while a parallel hybrid engine with a 1:1 gear ratio to the differential can perform efficiently at the higher speeds.

In overcoming the initial inertia of rest of a vehicle or other load it would be desirable to add the rectified current from an engine driven alternator to that from the battery pack, applying the sum to the electrical drive motor. With conventional alternator structure there is much elemental iron in the magnetic circuit of the alternator and passing the current from the battery pack to the motor thru the alternator would be unthinkable since the iron would saturate, causing a loss of output current from the alternator. The alternator would become merely a load.

Therefore, it is an object of this invention to overcome the general disadvantages set forth hereinbefore.

It is a further object of this invention to provide an improved hybrid electrical-heat engine drive for a mechanical load.

It is an additional object of this invention to provide an electrical drive system which provides, selectively, high torque for a desired period of time.

SUMMARY OF THE INVENTION

By utilizing as an alternator one of the type invented by me and described in my copending application Ser. No. 23,607 filed Mar. 26, 1979 and entitled "Totally Ironless Dynamoelectric Machine," it is possible to put the rectified output of such alternator in series with the battery pack powering the electric drive motor so as to give a surge of mechanical power without the magnetic saturation and loss of output which would be experienced if a conventional alternator were it to be utilized similarly.

Thus, with the invention described here, the ironless alternator may, selectively, be placed in series with, in parallel with, or in lieu of the battery pack providing electrical power to the electrical motor driving the mechanical load, e.g. the wheels of a hybrid vehicle. The ironless windings in disc-armature alternators utilized in this invention are light in weight. These alternators maintain high efficiencies at all speeds. If the electrical drive motor for the vehicle is a series-wound D.C. motor its torque increases as the square of the amperage flowing to it.

Thus, greatly improved acceleration can be realized with the combination acording to this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may be best understood by reference to the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a schematic diagram of a hybrid vehicle according to my invention;

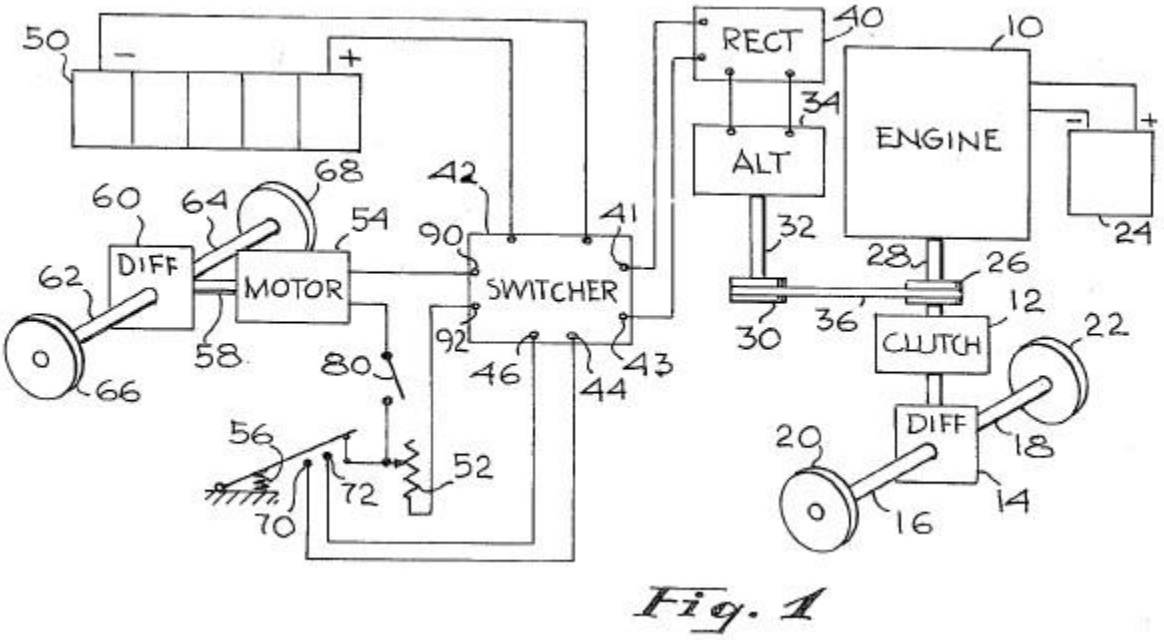
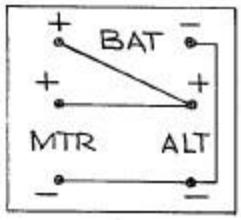


Fig. 1

FIGS. 2A-2C are schematic diagrams of certain switching patterns for the switching portion of the diagram of FIG. 1.



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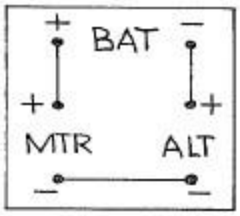

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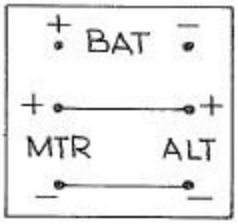


C

Fig. 2

FIG. 3A is an edge view of a disc armature--field alternator construction usable in this invention; and

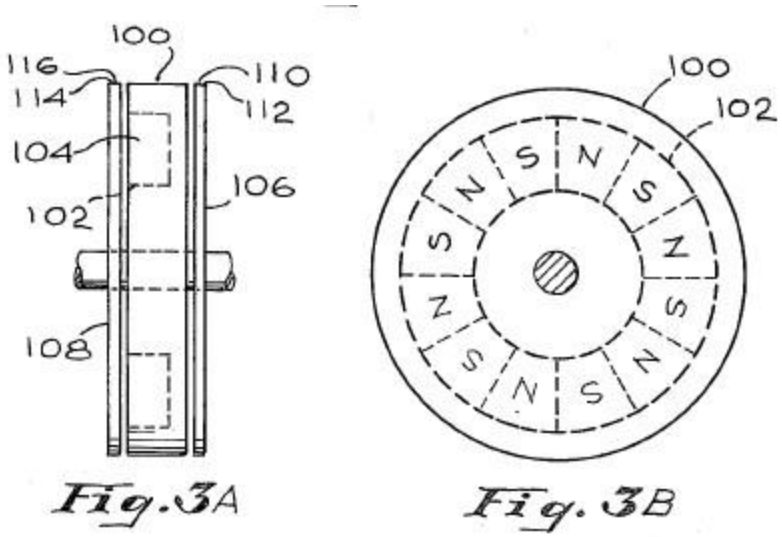
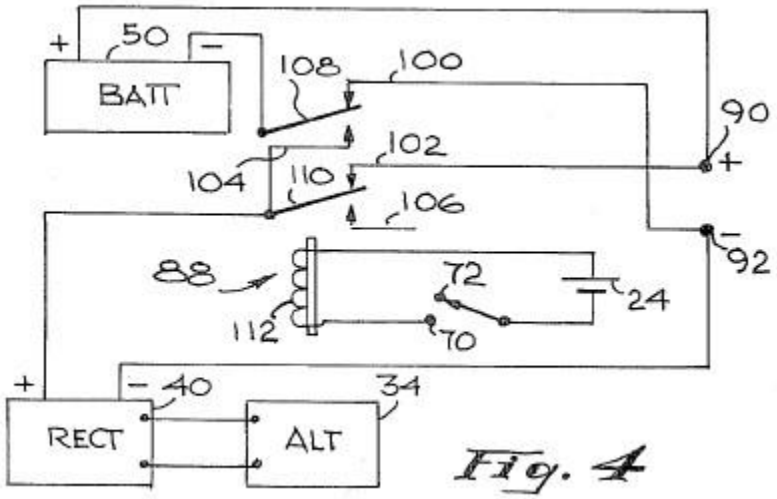


FIG. 3B is a side view of a portion of FIG. 3A.

FIG. 4 is a relay circuit.



DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIG. 1, heat engine 10, which may be an internal combustion engine, a solar engine, a nuclear engine, or the like is coupled through clutch 12 (which may be an automatic one-way clutch) to differential 14, which, in turn is coupled to axles 16 and 18 which carry wheels 20 and 22, respectively. Because of the features of this invention, a gear ratio of 1:1 may be maintained from engine 10 to differential 14, which assures maximum efficiency for the power train.

An auxiliary battery 24 may be provided in connection with the ignition system of engine 10.

A drive pulley 26 is provided on engine shaft 28 for power take-off to pulley 30 on shaft 32 of alternator 34. Belt 36 intercouples pulleys 26 and 30 for power transfer between engine 10 and alternator 34. Alternator 34 is of the type described in my copending application Ser. No. 23,607 filed Mar. 26, 1979 and entitled "Totally Ironless Dynamoelectric Machine." Such a machine has no elemental iron in its magnetic circuit. The alternator may be of the disc armature or drum type described in that application. The field is provided by permanent magnets, preferably of the ceramic ferrite type. One example is shown in FIGS. 3A and 3B.

In FIGS. 3A and 3B a die-cast aluminum disc 100 contains pockets 102 for receiving ceramic magnets 104. In this configuration both bi-polar and one homo-polar surface are covered by aluminum. There are no radial conductors separating magnets, one from the other.

Because of the non-magnetic nature of aluminum both coils 106 and 108 intercept lines of flux from magnets 104 and produce AC output voltage at terminals 110, 112 and 114, 116, respectively. This is only one possible configuration for alternator 34. My prior application may be seen for other configurations.

The output of alternator 34 goes through semiconductor rectifier 40 where it is changed to D-C and is applied to terminals 41, 43 of switcher 42. Switcher 42 may be a set of electromechanical relays with appropriate contacts or the proper combination of triacs or other thyristors. Both solid state and electromechanical relays and these circuits are well known and need not be described here.

The control signal for switcher 42 is applied to terminals 44, 46. Of course, manual switching may be utilized.

The switching modes which can be achieved by switcher 42 are shown in FIGS. 2A, 2B and 2C.

In FIG. 2A, rectified output from alternator 34 is connected in parallel with the output of battery pack 50 and is applied, through speed control 52 to electrical drive motor 54. Speed control 52 is a variable electrical resistor which may be mechanically coupled to foot pedal or accelerator 56. The output shaft 58 of motor 54 is coupled through differential 60 to axles 62 and 64 which drive wheels 66, 68, respectively.

In the switching mode shown in FIG. 2A, alternator 34 may be considered merely a charging means for battery 50.

If sudden acceleration is needed the switching mode of FIG. 2B may be desirable. In that mode, battery 50 and alternator 34 are in series with each other, electrically, and are connected across motor 54. If motor 54 is a series-wound motor its output torque will go up as the square of the current flowing through it. Thus, by putting battery 54 and alternator 34 (through rectifier 40) in series, the current thru motor 54 will be significantly increased and its torque increased as the square of the increased current. Impressive acceleration of the vehicle or other load will result. The changes to series feed from parallel feed can be accomplished in response to a depression of foot pedal 56 so as to close contacts 70, 72.

This is a similar phenomenon to the depression of the accelerator in a conventional car when it is desired to put the car in "passing gear." A relay circuit which will accomplish this end is shown in FIG. 4.

In FIG. 4, relay 88 includes fixed contacts 100, 102, 104 and 106, and switch arms 108 and 110. Relay 88 also includes solenoid 112 which is connected in series with switch contacts 70, 72 and auxiliary battery 24. When contacts 70, 72 are not closed the relay contacts are as shown in FIG. 4. Battery 50 and rectifier 40 (which is rectifying the output of alternator 34) are connected in parallel across output terminals 90, 92 of switcher 42. Alternator 34 (with rectifier 40) may be considered as merely charging battery 50. When contacts 70, 72 are closed, as by depressing the accelerator foot pedal, solenoid 112 is energized and switch arms 108 and 110 move into contact with contacts 104, 106, respectively. As a result, battery 50 and rectifier 40 are connected in series across output terminals 90, 92 and motor 54 receives a surge of current. Its torque output (if it is series wound) goes up as the square of such current; and the load (e.g., the vehicle) is accelerated. The relay may be solid state or electromechanical.

FIG. 2C shows the switching mode for running motor 54 solely from alternator 34, with battery 50 eliminated from the circuit. Engine 10 drives alternator 34, the rectified output from which runs motor 54, with speed control being provided by means of variable resistor 52, which may be adjusted by means of foot pedal 56.

Manual means not shown may be provided on the control panel of the vehicle to select the switching mode of FIG. 2, and, hence the source of operating current for electrical drive motor 54.

For maximum fuel economy in highway driving the circuit to electrical motor 54 is broken by a switch 80, for example, and automatic one-way clutch 12 couples heat engine 10 to differential 14 with a 1:1 gear ratio. For maximum efficiency in city driving, automatic one-way clutch 12 de-couples heat engine 10 from differential 14 and switch 80 is closed, permitting electrical drive motor 54, alone, to propel the vehicle. This clutch change can be accomplished automatically by well-known speed sensing devices, such as centrifugal devices.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from my invention in its broader aspects, and, therefore, the aim of the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of my invention.

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Classification: - international: H02K25/00; H02K33/18; H02K25/00; H02K33/18; (IPC1-7): H02K33/18 - European: H02K25/00; H02K33/18

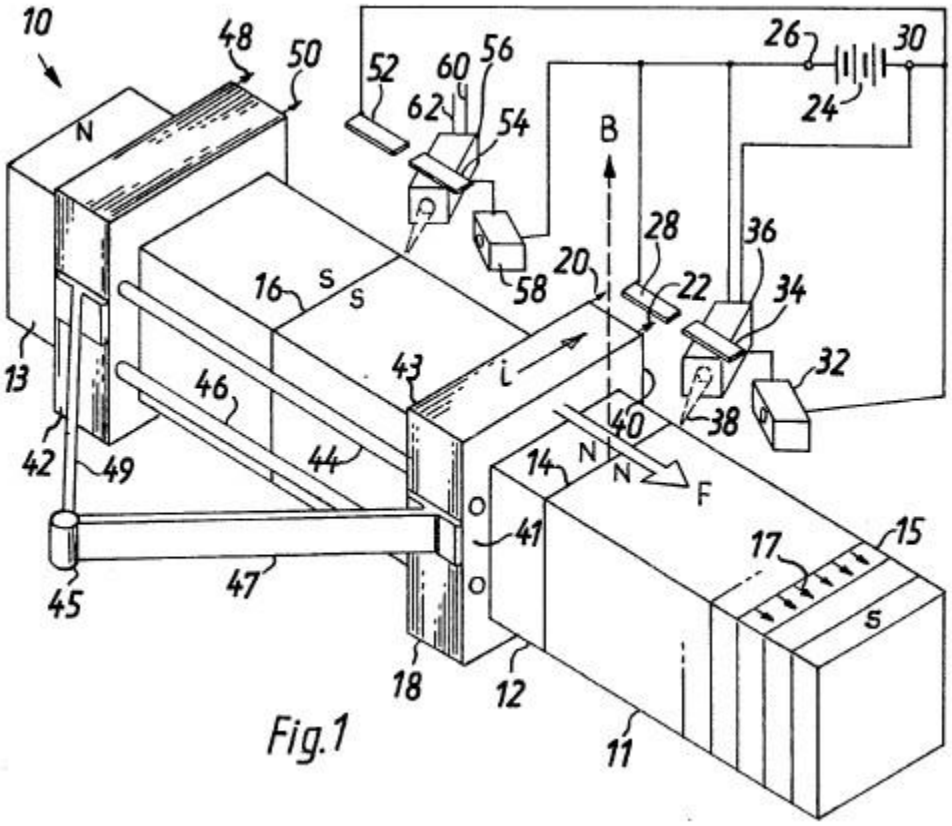

Fig.1

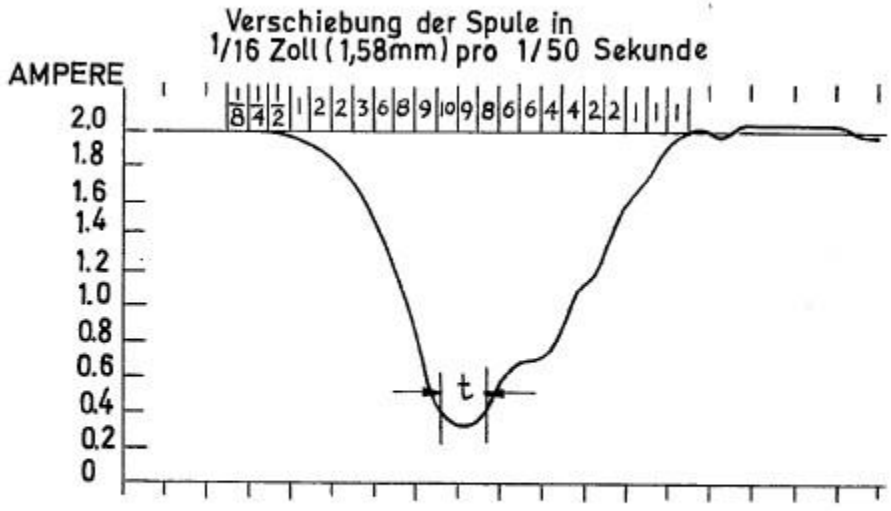

Fig.2

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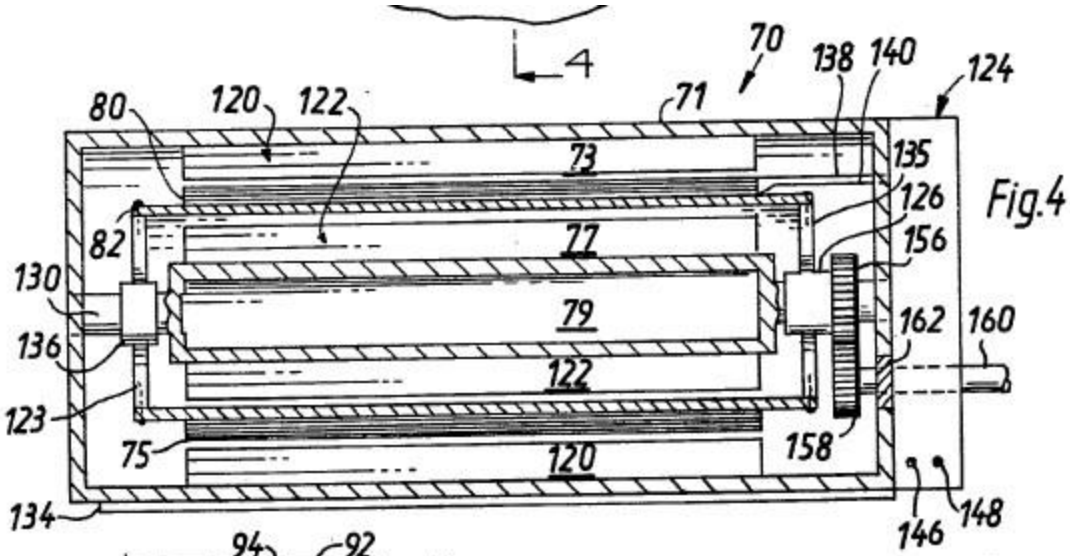
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Fig.4

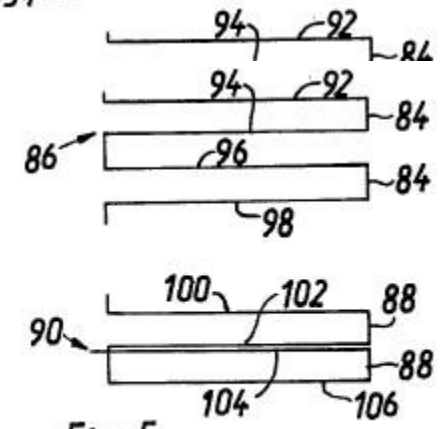
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Fig. 5

Fig. 6

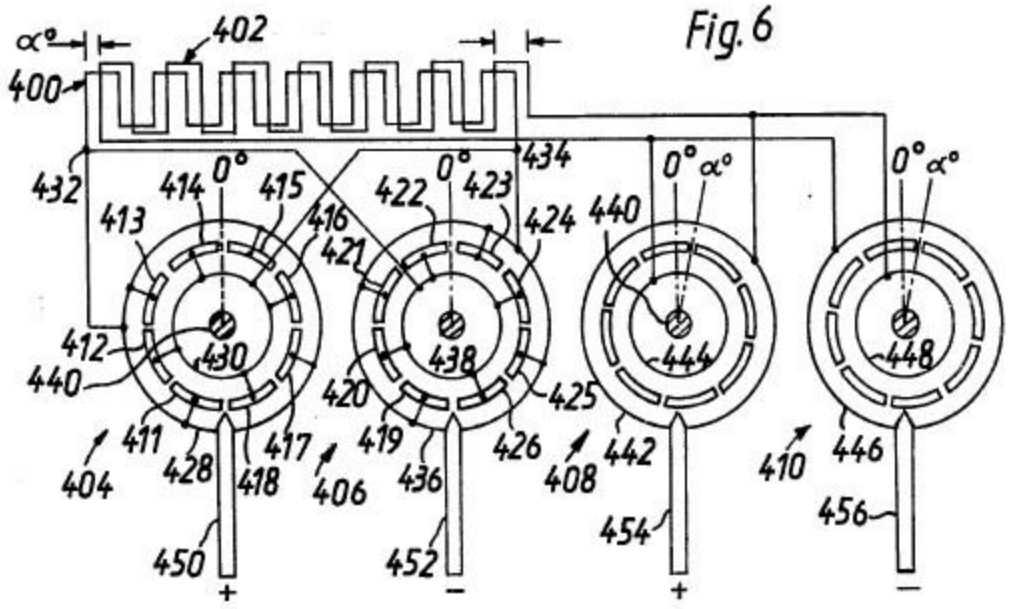
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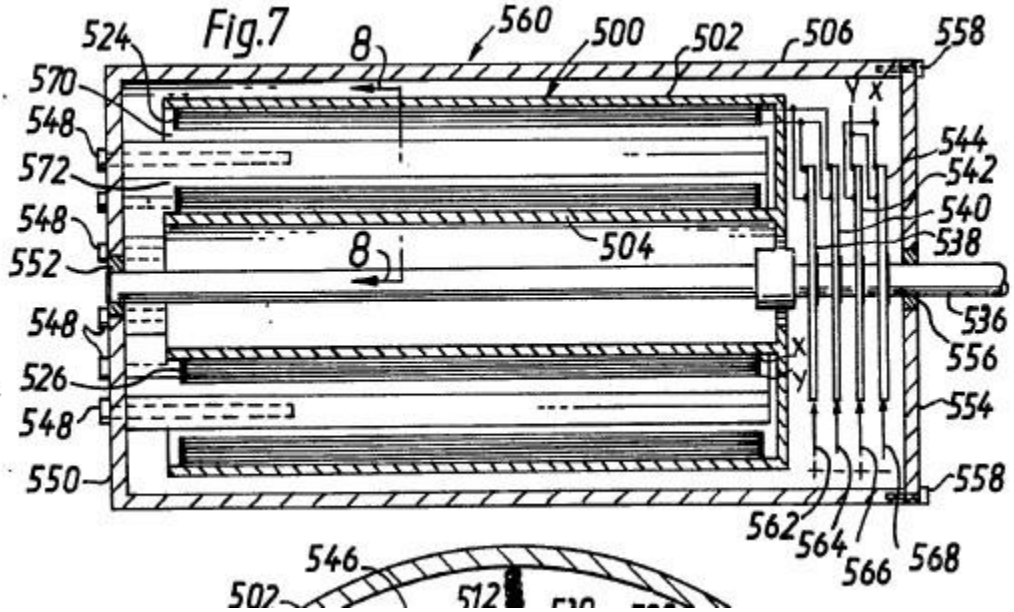
Fig. 7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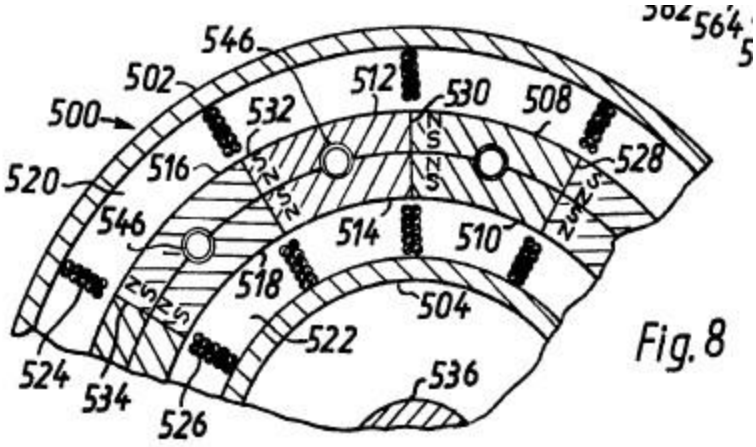

Fig. 8

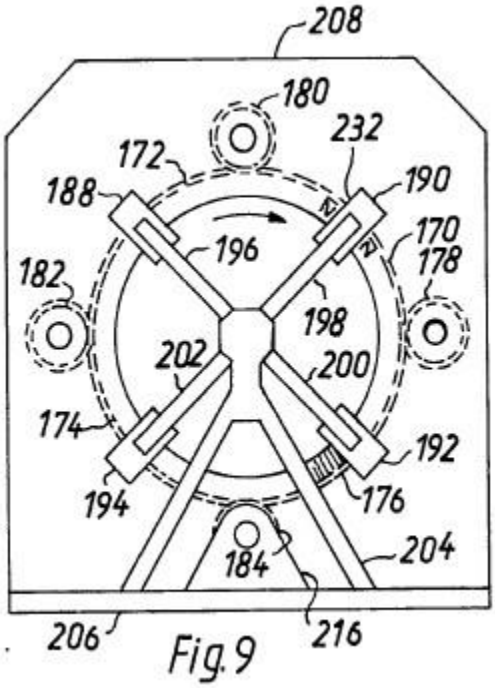

Fig. 9

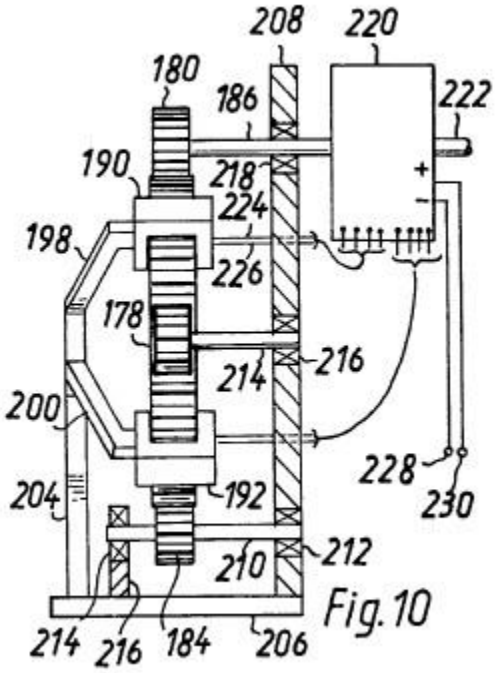

Fig. 10

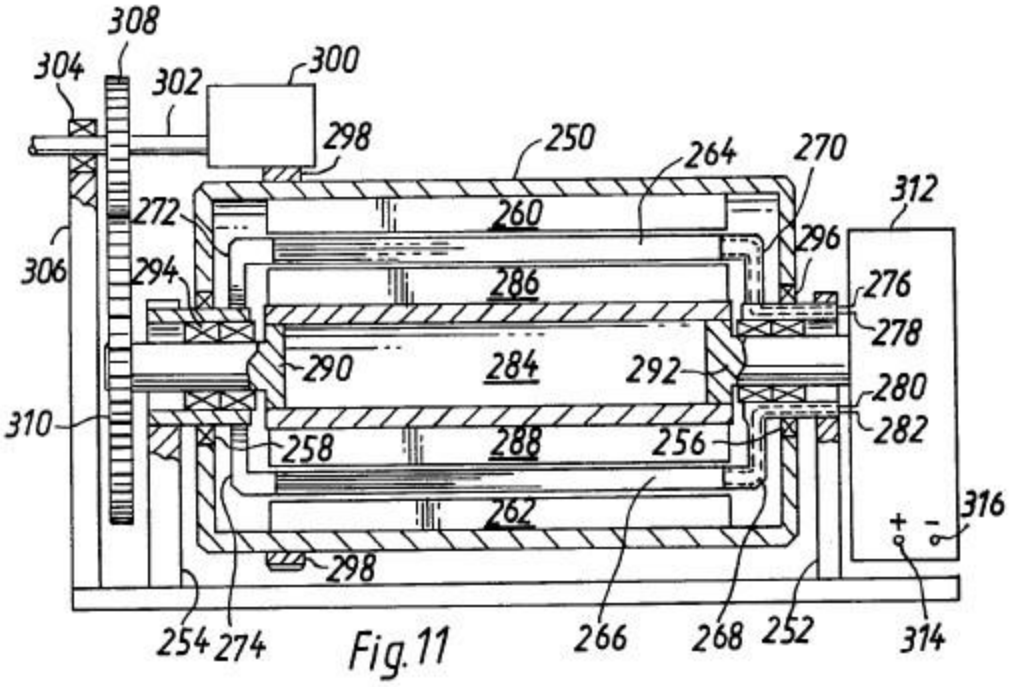

Fig. 11

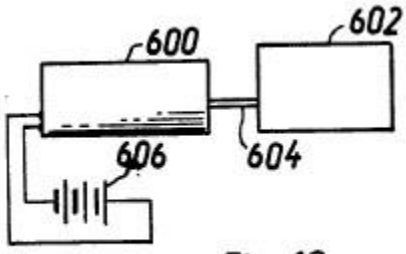

Fig. 12

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US3610974
Dynamo-Electric Stepping Arrangement

1973-10-11
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Also published as: DE2216408 (DYNAMOELEKTRISCHE STUFENANORDNUNG)
Current U.S. Class: 310/19 ; 310/154.03; 310/154.25; 310/180; 310/266; 310/49R

Abstract -- Dynamo-electric stepping arrangement including at least one annular, inner permanent magnet composed of a pair of semicircular segments disposed within a circular

hollow outer permanent magnet similarly composed of a pair of semicircular segments whereby the opposing poles of the magnets are arranged adjacent each other in magnetic repulsion so as to create a high-density magnetic field about the inner and outer magnets approximately 180.degree. apart. A pair of coil carried on respective quadrants are encircled about a portion of the inner magnet so as to move about the magnet between the inner and the outer magnets. A current device is operably connected to the coils for selectively and periodically pulsing the coils so as to establish an attractive magnetic force at the respective leading ends of the coils whereby the coils and hence, the quadrants, will move in a rotary manner. By mounting the quadrants on a shaft, a work output may be generated.

BACKGROUND OF THE INVENTION

1. Field of the Invention

A dynamo electric stepping arrangement wherein by controllably coordinating adjacent magnetic fields sufficient magnetostatic force is generated to perform useful work.

2. Description of the Prior Art

Man's improved technology has wrought tremendous advances in many fields and, in particular, the science of magnetism influences almost every field of human activity. The wide and varied uses of the properties of magnetism form an integral, essential component of navigational and surveying instruments and the very heart of most electric motors and instrumentation. Almost all electronic equipment utilizes features of magnetism either directly or in the supplying circuits therefor.

Although magnetism is one of the oldest forces known to man, little has been done to harness the natural forces of magnetism in the form of a practical and efficient power source. Generally, power sources, such as motors and generators, for example, are presently being designed and fabricated by conventional methods and to standards which have been in use for many years. These designs and methods usually involve the conversion of electrical energy into mechanical work by employing such elements as field poles, armatures, condensers and brushes.

In some instances, involving extremely small power outputs, magnetic forces have been employed in such devices as blenders and mixers; however, these devices are totally unsuitable for developing sufficient power to operate under conditions requiring a substantial loading of the power source such as may be used for a wide variety of tasks as in pumps, vehicle propulsion, and other mechanical and hydraulic apparatus when the power source is heavily loaded at all times. Furthermore, such conventional devices, although using natural magnetic forces, also include electromechanical or electromagnetic devices in combination therewith.

Improvement in primary power sources incorporating natural magnetic force techniques which are permitted by modern technological approach and conceptual improvement can readily reduce the cost of such primary power sources and make the power sources more durable, long lived and more compact by effecting the controlled distortion of the magnetic lines of force so that a

significant differential in flux density results whereby the known laws of magnetic attraction and repulsion can then be applied to effect major mechanical displacement.

In the past, several attempts have been made to effect a controlled distortion of magnetic lines of force employing permanent magnets arranged in juxtaposition with respect to each other that may be physically or electromechanically operated to obtain a desired flux density pattern suitable to cause mechanical displacement to take place between the magnets. One such attempt is set forth in the disclosure of U.S. Letters Pat. No. 1,724,446 which provides fir intermittently introducing a shunt into the magnetic flux field of one of a pair of magnets arranged in juxtaposition relationship to create an attracting magnetic field and then withdrawing the shunt to create a repulsive magnetic field to cause one of said magnets to be alternately attracted to and repelled from the other magnet.

However, difficulties and problems have been encountered by such conventional devices that stem largely from the fact that means are required to physically move the shunt into and out of the magnetic flux density pattern at precisely timed intervals; otherwise the efficiency and usefulness of the device as a power source is obviated. In some instances, such shunt actuation means operate electromagnetically which necessitates an external supply of electrical potential. Obviously, such means as are required by conventional magnetic power source devices represent relatively complex structures involving ancillary power and critical programming means so that the devices cannot be said to operate and function by employing pure utilization of natural magnetic forces.

Accordingly, the novel magnetic power source of the present invention obviates the difficulties and problems encountered by conventional power sources by providing means for establishing a concentrated magnetic force field along movable, alternating positions in circular path so as to effectively react in cooperation with the magnetic field of permanent magnets whereby the attraction and repulsion of the magnetic fields for each other may be converted into mechanical movement. In one embodiment of the present invention, the magnetic power source provides an annular permanent magnet made from a pair of semicircular magnets having a north pole and a south pole established 180.degree. apart and another hollow permanent magnet arranged in fixed spaced relationship about the firs mentioned magnet having a similar polar arrangement. A pair of quadrant coils are supported on a rotatable shaft about the first mentioned, annular magnet so as to be movable disposed thereabout within the space between the annular magnet and its surrounding permanent magnet.

I have discovered that by subjecting the quadrant coil members to periodic and controlled energization by application of current through the coils, an attractive magnet field is established immediately preceding or ahead of an opposite magnetic field and a repulsive field behind having a different polarity as established by the cooperative and cumulative effect of the permanent magnet. The natural attraction of the opposite magnetic fields will cause the rotatably mounted coil elements to travel in the direction of the attractive force. Obviously, by mounting the coil quadrants onto a rotatable shaft, the shaft will turn in response to the attractive magnetic force of the moving coil quadrants so that mechanical movement is effected. By providing a plurality of stages which are staggered with respect to magnetic polarities, a continuous rotary

motion or movement can be developed so that continuous and smooth work output may be derived from the shaft.

Therefore, it is among the primary objects of the present invention to provide a magnetic power source means employing the natural magnetic forces of attraction and repulsion of permanent magnets for each other which may be converted into mechanical motion by employing a movable coil element adapted to selectively generate a periodic magnetic flux density at critical locations or positions along the circular path of permanent magnets so as to create an attracting magnetic field.

Another object of the present invention is to provide a novel magnetic power source that employs the natural forces of magnetism to create mechanical movement between permanent magnets and an electromagnet in the form of a coil surrounding an annular permanent magnet whereby relative movement between the electromagnet and the permanent magnet is effected upon and in response to selective energization of the electromagnet.

Another object of the present invention is to provide a novel magnetic power source or motor as well as a generator as a correlary that may readily employ the natural magnetic forces available through the use of a permanent magnet and an electromagnet to create rotary movement between spaced apart magnetic means having their pole pieces arranged in opposing juxtaposition relationship as well as a moving relationship.

Still another object of the present invention is to provide a novel magnetic power source, motor or generator employing natural magnetic forces having a sufficient amount of torque created thereby to perform useful work under relatively high load conditions.

Another object of the present invention is to provide a novel magnetic power source or motor that is economical to manufacture and which employs a minimum number of parts or components utilizing permanent magnets, coils and other material readily available on the commercial market.

Another object of the present invention is to provide a novel power source utilizing the natural force of magnetism to effect mechanical displacement between opposing elements for either rectilinear or rotary movement.

It is another object of the present invention to provide a novel power source utilizing the natural force of magnetism to produce substantial power under operational loading conditions to effect rotary or rectilinear displacement between adjacent mechanical members arranged in close proximity.

Still a further object of the present invention is to provide a novel magnetic motor whereby the attraction and repulsion of permanent magnets for each other may be converted into motion by selectively energizing a coil or pair of coil elements mounted on a rotatable shaft so that the pulsing of the coil element occurs at critical locations with respect to permanent magnets so as to create a magnetostatic driving force.

BRIEF DESCRIPTION OF THE DRAWINGS

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawings, in which:

FIG. 1 is a perspective view of one embodiment of a power source employing the natural forces of magnetism in accordance with the present invention;

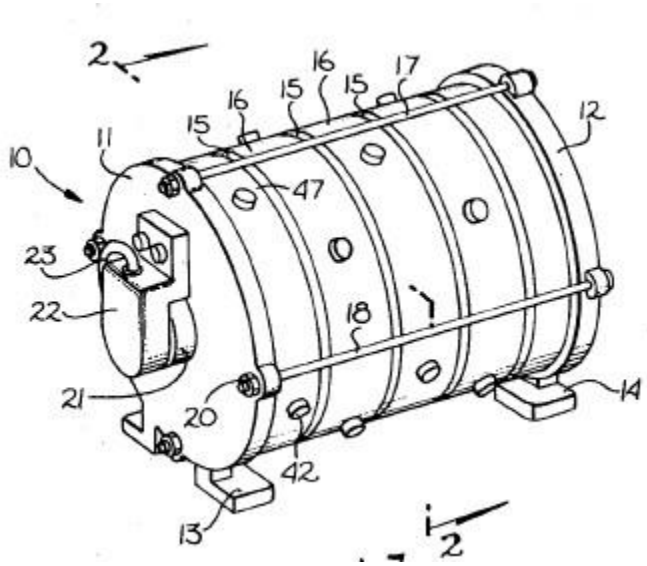

Fig. 1

FIG. 2 is an enlarged cross-sectional view of the power source illustrated in FIG. 1 as taken in the direction of arrows 2--2 thereof;

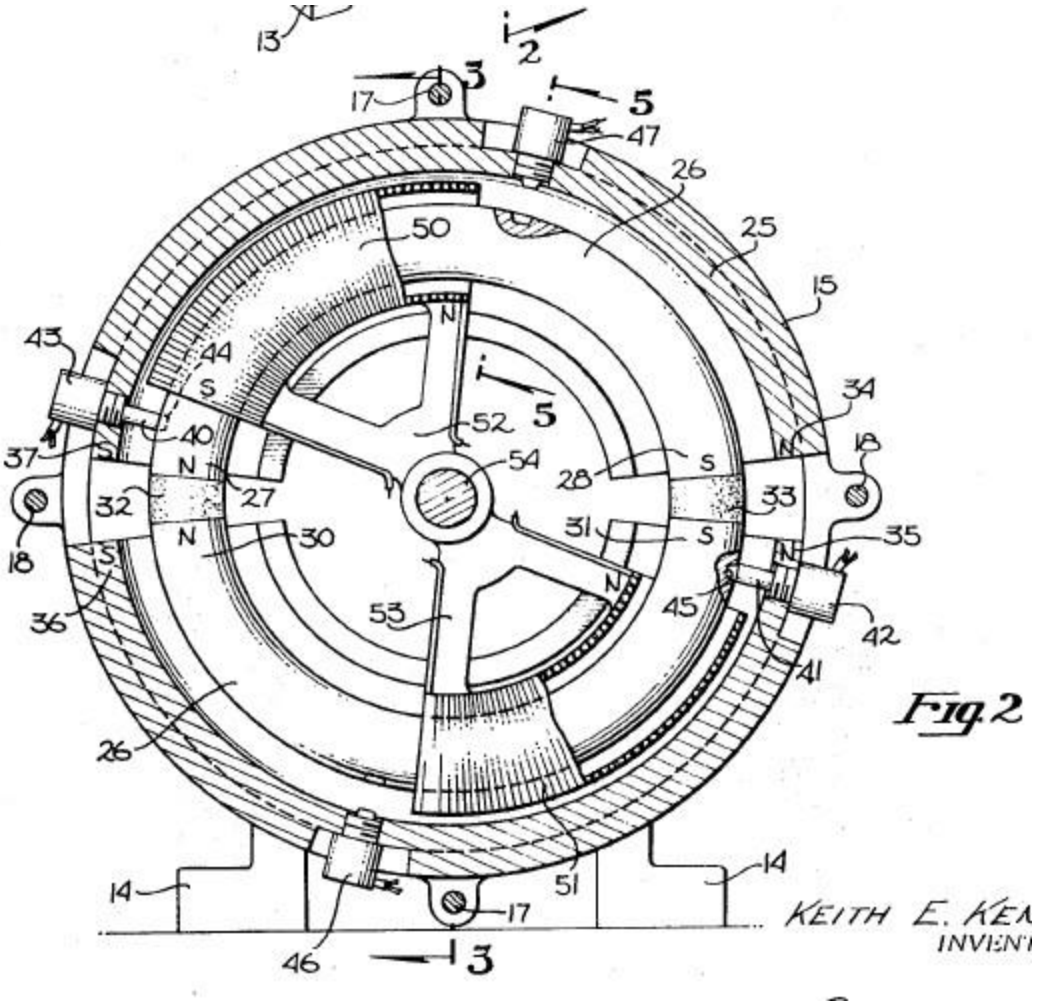

Fig. 2

FIG. 3 is a longitudinal cross-sectional view of the power source illustrated in FIG. 2 as taken in the general direction of arrows 3--3 thereof;

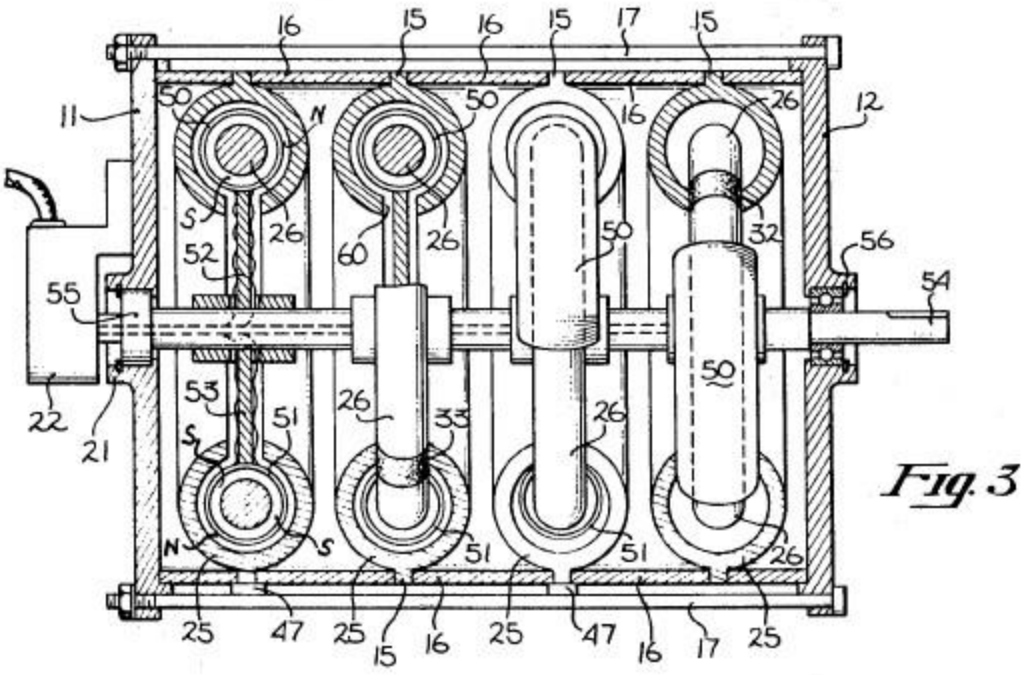

Fig. 3

FIG. 4 is an exploded perspective view showing the staggered arrangement of annular permanent magnets employed in the power source shown in FIGS. 1-3;

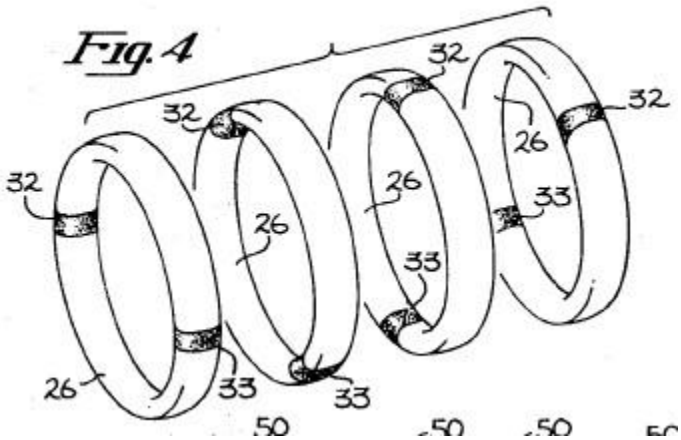

Fig. 4

FIG. 5 is an enlarged view of a suitable means for releasably supporting each of the annular magnets as taken in the direction of arrows 5--5 of FIG. 2; and

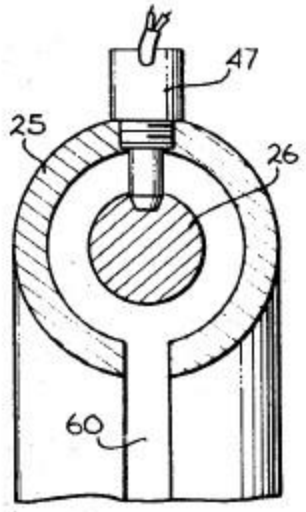

Fig. 5

FIG. 6 is a schematic drawing of a circuit including control means for selectively energizing the coil elements included in the present invention as well as the magnet supporting means.

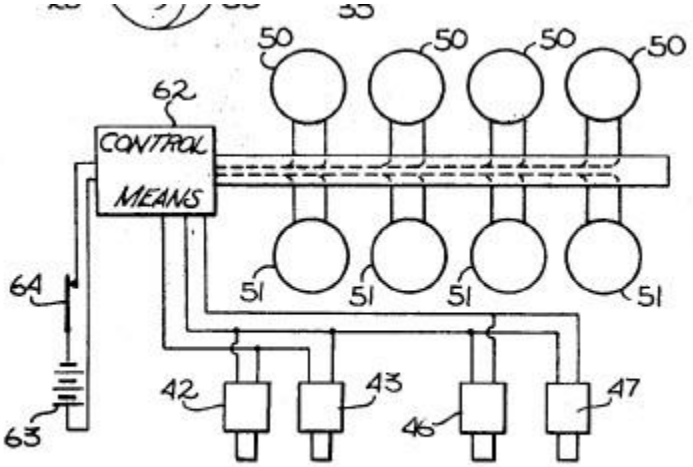

Fig. 6

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, a magnetic power source is illustrated in the general direction of arrow 10 which includes a pair of end plates 11 and 12 having base feet 13 and 14 for supporting the power source on a suitable foundation. The end plates are spaced apart and separated by elements of the device such as support elements 15 and spacers 16. Tie rods, as indicated by numerals 17 and 18, communicate between the end plates so as to compress the elements 15 and spacers 16 together when fastened by means of nuts 20. A bearing means is enclosed within the housing 21 carried on both ends of the plates and suitable electrical commutating and control circuits are contained within housing 22 adjacent housing 21 on plate 13. A cable 23 connects

the circuits and commutator within housings 21 and 22 to a suitable source of power. toroidal partially

Referring now to FIG. 2, a transverse cross-sectional view of the apparatus is shown in an enlarged illustration. The support elements 15 are disposed between adjacent opposing sides of spacers 16 from a ridge about a hollow toroidal magnet 25. In FIG. 3, for example, it can be seen that the magnet 25 is solely supported by the compressive force of nonmagnetic spacers 16 against the element 15. Also, it can be seen that the internal bore or hollow of magnet 25 is partially occupied by an annular magnet 26.

FIG. 2 further discloses that the outer magnet 25 and inner magnet 26 are composed of semicircular segments provided with common or similar polarized ends facing each other. For example, ends 27 and 28 of one semicircular segment face ends 30 and 31 of the other semicircular segment. Only removable insulative material 32 and 33 separates the ends of the magnets segments forming the circular magnet or magnetic ring 26. Such material is for rigidity and to effect remagnetization of magnets. Similarly, it is to be noted that magnet 25 is composed of a pair of semicircular magnet segments separated by an air gap between their opposing end pieces which are of the same polarity. For example, end 34 and 35 are facing one another and are of the same magnetic field polarity and therefore are in repulsion. Their opposite ends 36 and 37 are of the same polarity and therefore in repulsion.

The inner magnet 26 is supported by any suitable means, such as a pair of pins 40 and 41. The pins are movable carried in conventional solenoid switches 42 and 43 so as to move toward and away from the ringlike, inner magnet 26. At certain locations along the outer periphery of the inner ring magnet, there are provided recesses, such as recesses 44 and 45, adapted to insertably receive the ends of the pins 40 and 41, respectively. When the pins are so engaged, the inner ring magnet 26 is supported within the confines of the outer magnet 25. Furthermore, it is also to be noted that another pair of solenoid operated switches 46 and 47 are provided which also include pins adapted to be selectively engaged with corresponding recesses in the ring magnet 26. The former and latter sets of pins are designed to operate alternatively so as to support the inner ring magnet by either set of pins according to control signals supplied to the respective pairs of solenoid switches. Other mechanisms may be employed for supporting the inner ring magnet 26. Alternating support members may be pivotally mounted on an axle for rocking back and forth so as to support the magnet at locations not encircled by either of the coils (to be described later). The rocking movement may be suitably programmed so as not to interfere with any moving parts or components of the apparatus.

In FIG. 2, it can be seen further that the ring magnet 26 is partially encased by a pair of coil elements 50 and 51, respectively. Coil elements 50 and 51 may be referred to as electromagnets carried on the ends of webs 52 and 53 consisting quadrants which are in turn secured to a shaft 54. The opposite ends of the wire forming the coil elements 50 and 51 extend along the quadrant waves 52 and 53 and terminate in a commutator arrangement within housing 22. It can be seen that as the elements 50 and 51 move about the inner ring magnet 25 within the space separating magnet 26 from magnet 25, the separate pair of support pins for mounting ring magnets 26 must be alternatively actuated to permit uninhibited passage of the coil elements.

Therefore, it can be seen that by energizing the elements 50 and 51, a polarity is established which is opposite (and attractive) to the polarity of the ring magnet 26 as the forward side of the coils approach the adjacent ends of the ring magnet as well as the outer magnet adjacent ends. For example, as illustrated, the adjacent ends of the magnet segments for the inner magnet 26 and the outer magnet 25, located along the left hand side of the drawing, are indicated as "S" and "N" polarity respectively, while the opposing ends along the right-hand side of the drawing are indicated by polarity "S" and "N" respectively. The indication for the coil segment 50 indicates a polarity "S" approaching the "N" polarity of the inner magnet while the forward side of coil segment 51 is indicated as being of "N" polarity as it approaches a magnetic field of "S" polarity. Obviously, attraction will occur which will cause the quadrant elements to move counterclockwise to rotate shaft 54. This phenomenon is easily established by employing a conventional "cow" magnet with a coil of wire slidably mounted thereon such that when electrical energy is supplied to the coil, the coil, the coil will move axially from the magnet so as to be separated therefrom as far as possible.

Sufficient attraction of the leading end of the coils with respect to the magnetic fields is available to cause the leading or forward side of the coil element to rapidly approach the opposite field polarity, to cross the magnetic field and to progress beyond after crossover. In some instances, depending upon criticality of parts, the coil segments would have a tendency to reverse and go back to the crossed over polarity field of opposite value. However, in an advanced design of the present invention, a plurality of stages are provided as shown in FIG. 3, wherein as the coil segments associated with the first stage to go beyond the magnetic field of opposite polarity, the coil segments of the second stage are approaching. This sequence takes place with respect to the third and fourth stages as well.

Referring now to FIG. 3, it can be seen that the shaft 54 is rotatably carried on friction-free bearings 55 and 56, respectively. The commutators employed for selectively energizing the solenoid switches and the coil segments are suitably housed within housing 22. Furthermore, it can be seen that the wires from the coil segments extend down the quadrant webs 52 and 53 and then extend along the shaft 54. It is to be noted that the inner diameter of each outer magnet 25 is formed with a slot 60 so as to permit the associated webs 52 and 53 to rotate without encountering interference. Also, it can be seen that the magnets are arranged in a series or staggered staged relationship. For example, four stages are shown in FIG. 3 wherein the coil elements are illustrated in a different position from each other so that a continuous and smooth work output can be obtained from shaft 54. The staggered relationship of adjacent magnets is diagrammatically illustrated in FIG. 4 wherein four inner ring magnets are illustrated such that the opposing ends of their segments are in different axial alignment. All of the ring magnets are coaxial with respect to each other but the high density magnetic fields are offset with respect to adjacent high density magnetic fields. Consequently, the coil elements associated with each of the inner ring magnets will be offset in a similar fashion as shown in FIG. 3.

With reference to FIG. 5, an enlarged cross-sectional view of a portion of the core or inner magnet 26 is illustrated in connection with its spaced relationship to an outer magnet 25 and a switch mechanism 46. The slot 60 formed in the outer magnet 25 is illustrated so as to permit passage of associated core element webs 52 and 53 as the magnetic fields attract the coil elements.

Referring now to FIG. 6, a diagrammatic illustration is presented in which the pulse energization of the various coils 50 and 51 are effected by a control means 62, such as a commutator that suitably supplies current from a battery 63 to the coils 50 and 51 in each stage. Also, the control means supplies suitable current to the switch means 42 and 43 as well as 46 and 47 so that inner magnetic cores 26 are suitably supported as the coils 50 and 51 rotate thereabout in a circular manner. A suitable ON/OFF switch 64 is provided.

From the foregoing, it can be seen that the apparatus of the present invention provides a novel magnetic power source employing the natural forces of magnetism in such a manner that a movable electromagnet will be drawn to a fixed magnetic field and caused to pass the fixed magnetic filed so as to create mechanical displacement between the fixed magnetic field and the movable magnetic field. Such a power source represents a tremendous advantage over conventional power sources inasmuch as electrical or electronic conversion systems are not necessary for the operation of the power source. Furthermore, not only can the present invention be employed as a magnetic motor but, is is contemplated that applications involving generators are included as well. It is to be understood that other uses are envisioned by the present invention and that additional magnetic stages may be employed which will have the advantageous effect of increasing the power output from the apparatus. Longevity of the power source if a function of the magnetic force available in the permanent magnets employed whether they are of the bar magnet type or the horseshoe magnet type.

If desired, rollers may be employed within the gap between the inner magnet and the coil portions and in the gap between the outer magnet and the coil portions. A magnetic lock is effected by the inner hysteresis of the core to be supported by the outer magnet. Also, any one stage or level of the device may be comprised of two or more magnet segments. It is to be noted that in addition to each coil segment 50 and 51 having opposite polarized ends as previously described, each coil carries an external or outward magnetic field which is "N" and an inner or inward magnetic field which is indicated in FIG. 3 as "S." These minor fields react with the fields of the inner core magnet and the outer ring magnet to effectively eliminate or substantially reduce drag as the coils move in their common circular path.

while particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

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"Vacuum Energy" Motor

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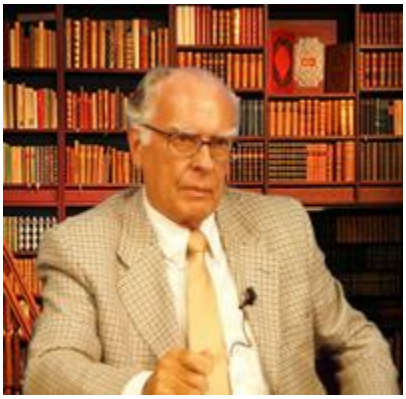
Keppe motor Club Forum --- http://keppemotor.wordpress.com/2008/12/30/the-keppe-motor-club-%E2%80%93-join-the-discussion/

Norberto Keppe



Keppe Motor

Based on the principles outlined in 'The New Physics Derived from a Disinverted Metaphysics ' by Norberto Keppe, especially the idea that energy doesn't come from matter. According to Keppe, the process is actually the opposite, meaning that matter comes from a previous, primary energy called Essential Energy, which is infinite and exists everywhere in the entire universe.

The New Physics

In his landmark book, The New Physics, Dr. Norberto Keppe outlines the basis for a new physics that transcends the postulates of Newton and Einstein and even the proposals coming from the realm of quantum physics. Keppe's book is a bold and prophetic re-thinking of the essential building blocks of science that promises to lead humanity to profoundly higher levels of technological and social development.

Keppe's findings were the inspiration needed for STOP engineers Cesar Soos and Roberto Frascari to discover the method by which to capture the scalar energy perceived by Tesla (also refered to as essential or divine energy by Keppe), thereby side-stepping the traditional means used by all motors to this point. To learn more about this revolutionary science, purchase the book.

The Keppe Motor is a highly efficient motor that was developed by Cesar Soos and Roberto Frascari, two Brazilian engineers who based this motor on totally new principles described in a book written by the scientist Norberto Keppe called, "The New Physics". This motor significantly reduces the consumption of electricity to generate the same mechanical power (torque) when compared to conventional electric motors that operates in the range up to 200 Watts (Dec/08.)

Based on studies made with existing working models*, the Keppe Motor saves between 70% and 93% of electric energy when compared to conventional electrical motors.

Motor Kit

Following up on the successful launch of the Keppe Motor Manual in late 2008, the STOP the Destruction of the World Association has announced the release of the Keppe Motor KIT to begin 2009.

Containing all the parts necessary to build your very own introductory version of the Keppe Motor, the Kit also contains an illustrated manual with all the step-by-step instructions you'll need to put the Motor together. Inside the Manual is a detailed exploration of the theory behind the Keppe Motor – Norberto Keppe's New Physics. This is a must read for anyone interested in the scientific basis behind this revolutionary Motor. The Manual also contains a number of experiments that you can conduct with this version of the Keppe Motor.

The Keppe Motor uses 5 times less energy than a conventional electric motor because it captures Scalar Energy from space. The STOP Association has decided to release this technology to the world in the hopes that many interested individuals will contribute to the study and development of this landmark technology.

Build and test your very own model and contribute to the development of the Motor.

An excellent gift for young people to teach them the new principles behind capturing energy that make this such a revolutionary technology

Video: www.youtube.com/watch?v=zqvkrzYgjKI

Purchase : http://www.keppemotor.com/user.php

Purchase your Scalar Energy Keppe Motor KIT today for **only USD 320.00 (Shipping Included)**. We'll also include the book, The ABCs of Analytical Trilogy, by Claudia B. S. Pacheco (available as a e-book).

[WHAT A BARGAIN !!]

Order your Premiere Version Keppe Motor Manual for only US$ 50.00!

Parts List

1) 2 pieces of 2x1 cm electrical cable duct 19 cm long.
2) 1 wood plate 15 cm long, 10 cm wide and 0.5cm thick.
3) 1 rectangular piece of wood 5 cm long, 1 cm wide and 0.5 cm thick
4) 1 piece of PVC tube with internal diameter of 2 cm and 3.5 cm long.
5) 1 on/off switch
6) 1 rectangular piece of Styrofoam (or wood) 4.5 cm long, 3 cm wide and 1.5 thick, with a 2.6 x 1.6 cm rectangular hole in the middle.
7) 1 neodymium magnet with diameter of 0.8 cm and 0.5 cm high.
8) 1 Reed switch for 3 Amps.
9) 1 rectangular piece of cardboard 8.5 cm long, 6.3 cm wide, with a 6x3 cm rectangular internal hole.
10) 1 rigid and straight metal shaft. Dimensions: length=12 cm, diameter=2 mm.
11) 2 equal square pieces of cardboard with 1.9 cm side.
12) 2 flexible blue (or black) wires for 1 Amp with an alligator clip in one end and a female spade terminal on the other end.
13) 1 rubber cylinder with diameter=1.5 cm and central hole of diameter=1 mm.
14) 2 ball bearings with flange. Dimensions: internal diameter=2 mm, external diameter=6 mm (without flange) and total diameter=8 mm (with flange).
15) 1 plastic support for the transformer. Dimensions: length=8.5 cm, width=6.2 cm and high=4.4 cm. Dimensions of the inner hole: length=5.6 cm and width=3.2cm.
16) 2 block ferrite magnets, magnetized perpendicular to the large faces. Dimensions: length=4 cm, width=2 cm and thickness=0.8 cm
17) 1 9V-Alcaline battery.
18) 2 male spade terminals.
19) 1 standard 9V battery connector with two female spade terminals.
20) 250g of enameled copper wire, AWG 28.

Videos

http://www.youtube.com/watch?v=xTwwt-lmEA8

www.youtube.com/watch?v=oY-AZl5jS9Y

http://www.youtube.com/watch?v=QPFbTAZXQ_c

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http://biogenesislab.blogspot.com/

Jean-Jacques buys $350.00 kit from Norberto Keppe a Scam

Keppe Motor Kit

I have received my Kit,

Opening it, it look nice. So I printed the manual (beside the typo mistakes) and read it. And started to check parts.

I was surprised to see the spool with two red connectors. The battery connector (black) was a flat male instead of a female one !

So I went on corrected this in order to be able to mount the kit. When finished, NOTHING RUNS !

Can you tell me more on this ! where to diag and what to find ?

I am more than disappointed it is a very expensive kit for having in final a 9v battery !

Hope to have a quick answer.

Thank you

Paul gets ripped off by Norberto Keppe

Keppe Motor simular to Newman-Bedini combination

@All

I decided to take the risk and bought the manual a couple of hours ago and am very disappointed Angry

It's a toy version of the Newman motor Roll Eyes

Ah well, nothing ventured nothing gained, hopefully the real motor isn't a window type motor Grin I'm always willing to forgive and forget!

Regards,
Paul

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http://pesn.com/2009/01/26/9501516_visit_Keppe_Brazil/
January 26, 2009

A Personal Witness Account of the Keppe Motor

Will Lajeunesse of Canada traveled to Brazil where he witnessed numerous demonstrations of the Keppe Motor. He also attended their demo in San Diego. Recommends their manual and kit.

The first Keppe Motor public demonstration in Cambuquira Brazil, July 6, 2008. They wrapped the motor in foil because this was the first time the motor was shown in public, and the also the first time the media was present. The patents had not been secured at this time, so it was decide not to allow public photos of the inside workings of the motor.

Will Lajeunesse of Edmonton, Alberta, Canada, and his friend, Susan Berkley, who has been a member of the group for over 20 years and lives in New York City.

The following is an email received on Jan. 24, 2009. The Keppe motor purportedly consumes just 7% of the energy to put out as much torque as conventional motors.

Dear Mr. Allan,

I enjoyed very much your interview on Coast to Coast AM and it is very good to hear of a person doing such good work, helping humanity find solutions to one of its largest problems.

I am not sure if you have heard of the Keppe Motor yet, but there have been some discussions about it at overunity.com. Unfortunately some folks there do not do their proper research and jump to unfair and even destructive conclusions about the Keppe Motor and the scientists behind it.

The Keppe Motor is not a rip off of the Bendini, Newman motor nor any other motor for that matter. Yes, it is similar to these motors but it is very different in key ways. In addition, the Brazilian Government asked the Keppe Motor team to accompany a Brazilian delegation to Poznan, Poland for the UN Climate Change Conference in Poznan, Poland.

I have done my proper research and traveled to Sao Paulo Brazil & San Diego to see this fantastic device and especially to meet the people behind it. I can tell you Sir, that this group of researchers is one of the finest in the world and they are not trying to deceive anyone. I have seen demonstrations of the Keppe motor many, many times and I can confirm and prove that it is what they say it is and they have the data to back it up. They have many working prototypes and even offer the manual & small experimental kit for sale online.

The Keppe Motor Manual is only $50.00 and it's over 44 pages long, full of scientific explanations and how to build your own Keppe Motor step-by-step. It is very cheap to build and takes little effort, very simple concepts and design. However this is a working model only and needs much more development before it is integrated into everyday uses. The pre-assembled kit is also for sale, and considering what this motor can do, it is a bargain at $350.00 US. However it is not necessary to spend that much money to own your own Keppe Motor as one should consider first building their own motor via the manual. They even include a parts list for free on their web site before you buy the manual. This is to show that they have nothing to hide and that they are honest.

The Keppe Motor stands apart from all other electromagnetic motors thus far. It has both the torque & high RPMs needed to be practical, and it runs cold! Yes sir, I have touched the motor directly many times after lengthy demonstrations, and it was cold every time. As you know, this violates the laws of physics that we are taught in school, yet I experienced it for myself many times. In addition, when one Keppe Motor is running next to another, the second motor begins to turn as well, at a lower speed. If you connect multiple Keppe Motors together they become much more efficient, and I have also seen this many times.

I own a copy of the Keppe Motor Manual and I am also currently building my own for testing/development purposes. I have become good friends with many of the people behind this new technology and I am now helping them promote it. I would like to send you the Keppe Motor Manual PDF for your review. Due to the legal terms of use, I cannot just send you a copy for free, so I am paying for it out of my own pocket. I also do not wish to steal from this beautiful group of people who work very hard every day to help humanity and need our support. I ask only that you please do not distribute this manual as they need to raise funds for further development.

I look forward to your opinion of the manual and the device if you choose to build it. We could certainly use your help getting the word out. Please see my Google Video link for the first Keppe Motor public demonstration located in Cambuquira Brazil. I took this footage myself, at approx 6:20 into the demonstration, you will see and hear this motor run.

The demo was on July 6, 2008, the first time the motor was released for public demos. I was there. The media was also there including local TV stations and newspapers. The public was very interested; and the motor was received very well. The group of scientists who created the Keppe Motor, including Dr. Keppe, are very well known in their communities and throughout Latin America.

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http://biogenesislab.blogspot.com/

John Bedini's Response to the Norberto Keppe Scandal-Lies-Exposed-Fraud-CopyCat

[via www.overunity.com]
http://www.overunit y.com/index. php?topic= 5601.10

From : Rick

Hello everyone,

I have viewed all of the videos presented here and I am sad to say that what is being presented is a very cleverly devised promotion of another inventor's work. The air-core stator designs are not new and the switching technique is one in which I am very familiar with. Does this mean I am

saying that they are indeed mine? No they most certainly are not.

In the midst of an energy and economic crisis of epic proportions, it is with great disappointment for me to see people trying to take advantage of a vulnerable public desperately seeking out new more affordable and cleaner energy solutions.

Is the Keppe book "The New Physics" being given out for free? No it is not. Obviously Dr. Keppe is trying to promote his book as are the editors of this book as well. The Keppe Motor is merely a ploy to generate interest in his books. Books he intends to make a great deal of profit off of.

What does one of the real inventors think of "The Keppe Motor"? I will allow him to speak for himself.

John Bedini's response --

"Rick,

Here is my response to the copy Window motor.

It would be nice if you would give credit where it is due. As I and Ron Cole are the real inventor's of this motor, it's called the window motor as I have shown for many years. If you think not, just type Window Motor into Google under Bedini Window Motor. Why don't you show the switching circuit or explain it? Also it could only be MY circuits that capture this energy for recovery into the second or third battery. The second switching circuit could only be the bi-polar switcher circuit on the internet. Let's get real, it's not a
good deal to take others work and call it your own!!!!!

The only other motor is Joe Newman's energy machine which uses contact switching which you do not have, so the only other way to capture Radiant or Scalar energy is the Bedini SG circuit, why because you can stop it without any current input or heating.The funny thing is everybody knows who put all the diagrams on the internet, my patents clearly show the switching in the Mono Pole motor and all the documentation on the internet surely shows no capacitor but a diode or bridge collecting the excess energy.

This is what is wrong with humanity as to why you are very limited in what can be done with your re-invented machine, the world will know the truth some day. If you find you are in disagreement with what I have said here it can be worked out as to who the real inventor's are. It really burns my ass what great men of science do with others work.You can not call this your motor at all, and it is plain theft of my circuits and motor which are protected in my patents. I would have wished we could have started on a better foot, post your circuit's and rotor magnet arrangement let's see!!!!!!!! It's been on my internet pages forever.

John Bedini

http://peswiki.com/index.php/Directory:Keppean_Scalar_Motor

Download :
http://pesn.com/Radio/Free_Energy_Now/recordings/2008/081020_EduardoCastela_KeppeanScalarMotor.mp3

On Oct. 20, 2008 Sterling D. Allan conducted a live, 1-hour interview with Cesar Soos, Eduardo Castela, and Richard Jones from the Keppe Motor group as part of the Free Energy Now radio show. The interview turned into a business brainstorming discussing about how the technology can be rolled out in an open source model.

How it Works

According to the company, in the Keppe Motor the movement is mainly caused by the secondary component of electrical energy, which comes directly from the energetic scalar field of space, being that the electrical energy used is only to give a start to the process of capturing this energy. And as a consequence, because it has little consumption of electrical energy, the motor does not heat and because the energy it uses is in accordance with nature, it can benefit from it.

To move a fan that generally uses 60-80 watts, the Keppean motor utilizes only 3 watts, an energy consumption 20 times less than normal. The Keppe Motor never heats up even when using high voltage such as 110 and 220 volts. It can greatly reduce the consumption of the motor adding spirals in its solenoid being that a small battery of 12 volts and 1.3 amps lasted 48 hours turning a fan.

A larger model that was built began to spin with only .6 watts and reaches a velocity of 3,000 RPMs comsuming only 15 watts and with a good comparison to other motors.

Primary source of energy: scalar or essential energy (from space).
Secondary source of energy: battery or electrical current used only to give the initial start.
Motor heating: none.
Environmental pollution: none.
Operating area: any place on the planet because it is not dependent on other sources of energy such as atomic, hydroelectric, eolic (wind) or coal.
RPM: adjustable in accordance with the applied voltage. 3500 RPMs has already been accomplished with a motor whose rotor weighs 400 grams and consumes 15 watts and 4500 RPMs with a 250 gram rotor.
Torque: a minimum of 5 times greater than the best conventional motors.
Efficiency: depending on the dimensions can be 20 times greater than normal motors.

Iron cores of conventional electric motors are no longer necessary, eliminating hysteresis loss;
Heat loss caused by electrical currents flowing through the coils (Joule effect) is minimized;
Heat loss from induced currents (eddy currents) caused by the movement of magnetic fields inside the metallic body of the motor is eliminated.

WO 2009 140750

Electromagnetic Motor & Equipment to Generate Work Torque

Inventors : Norberto Keppe, Carlos C. Soos, Roberto Franscari

Abstract -- The present invention refers to a high efficiency and cold electromagnetic motor able to considerably increase the electromagnetic and/or mechanic potential energy available to be used in any piece of equipment fed by primary sources of energy. More specifically, the present invention refers to a motor, or also a generator, that comprises structural and functioning features that reduce the consumption of electric energy and, at the same time, deliver mechanic potential energy and work torque at least equivalent to the conventional electric motors.

Field of Invention

The present invention refers to a cold and high efficiency electromagnetic motor capable of increasing considerably the electromagnetic and/or mechanical potential energy available to be utilized in any piece of equipment supplied with primary forms of energy. More specifically, the invention refers to a motor, or even a generator, which comprises structure and functioning characteristics that reduce the consumption of electrical energy and, at the same time, produces similar mechanical potential energy and torque to conventional motors.

In addition, the motor, object of the present invention has a more simplified structure that can be applied to any electrical device, specially those called electrical receptors, designed to produce, at least, the same power efficiency, but consuming less energy, without risks of overheating the equipment and, yet, reducing manufacture costs of the said devices.

Besides, the electromagnetic motor of the present invention solves a number of today's problems related to the use of conventional energy sources and the scarceness of electric energy, for it has the ability to deliver the same power, consuming less energy.

BACKGROUND OF THE INVENTION

Many types of electromagnetic motors are known today, and they are designed to deliver mechanical power - torque, from the interaction of magnetic components of a closed circuit supplied with electric current. All these motors known at the present state of the art are developed according to scientific principles, laws and theories pertaining to traditional physics and electricity, and considered universal, natural and inflexible laws, i.e., immutable. Nevertheless, scientific theories are limited to the understanding of the scientists who elaborated them, for example: Newton's laws, Ohm's laws, etc.

Therefore, it must be clear that a different perspective of the conventional scientific philosophy can lead to a new understanding of physics and an upgraded technology, which is able to give a practical solution to problems which are, so far, considered as intrinsic factors to a specific physical process.

More precisely, the most utilized electromagnetic motors today are the induction motors and the electric motors with rotor coils.

In general, the induction motors comprise a cylinder rotor made of metal (aluminum, for example) - or shorted out coils mounted on the said metallic cylinder, surrounded by electromagnets which are fed with electric AC current to generate a first variable magnetic field, so as to obtain electromagnetic induction. The magnetic field produces a current on the surface of the metallic cylinder (or shorted out coils), which, in turn, produces its own magnetic field. These two magnetic fields interact, by pulling and pushing each other, causing the cylinder to rotate and, consequently, deliver the mechanical power to the rotor shaft.

The electric motors with rotor coils comprise a number of copper wire coils mounted both on a metallic cylinder rotor and a stator, through which, usually flows an alternating electric current (AC), generating magnetic fields that attract and repel each other in semi cycles of 180[deg.], describing a typical sinusoidal wave function. Due to the polarity alternation of the magnetic field, the rotor spins and delivers mechanical power.

According to the state of the art the electromagnetic motors are usually based on two phenomena, as follows: 1) when we apply electric current through a conducting wire, the magnetic field is generated by the conducting material; and 2) if a conducting wire is exposed to a variable magnetic field, it will present an electric potential difference in both of its ends, and the electric current generated inside the conductor generates, in turn, a magnetic field which opposes to the external field that caused it.

In addition to that, the electric motors of the present state of the art are constantly fed with electricity, in order to generate the polarity alternation of the magnetic components intending to obtain the attraction/repulsion effect. Obviously, this process, in order to keep the rotor spinning under load (torque applied to the shaft), requires high energy consumption. As consequence, heat losses are inevitable.

Thus, as exposed hereinbefore, particularly due to the action- reaction interactions, one verifies that the electromagnetic motors are said to have intrinsic heat losses, which are impossible to be avoided. In other words, the alternating magnetic fields produced by the passage of alternating electric current through the stator and rotor coils of the motors cause them to heat up in the same proportion to the intensity and variation rate of these fields. Because of that, when an electric motor is fed by any kind of power supply - either battery or AC power public grid - the simple free-load spin of the shaft involves some mechanical torque, which reacts to the electric power supply circuit and represents a line voltage drop, against the feeding energy of the motor, tending to stop it. This voltage drop is technically known as counter electromotive force (back emf).

Nevertheless, to each mechanical load added to the line of the motor, the extra electric power required to overcome it will represent an increase in the back emf, i.e., a resistance increase. As consequence to that, the temperature of the windings rises and causes the efficiency of the motor to drop. In case the mechanical load is too high and exceeds its design limit value, overheating takes place and the motor burns.

In this sense, one can remark that the continuous supply of electricity (AC or DC) to the conventional motors involves a series of problems, especially those related to overheating and performance drop.

According to the scientific theories utilized to develop these electromagnetic motors, four intrinsic and opposing forces to the movement of the motor are considered, as follows: counter electromotive force, magnetic drag, hysteresis and eddy currents. All of these resistive forces result in heating and possible burning of the motors when they are subjected to heavy loads, for they demand continuous electric supply from the power source.

After the above explanations, the inventors claim, in spite of acknowledging the theoretical concepts known today, and complement that the same are incomplete, because they ignore the essential physical characteristics of the magnetic matter and/or electric conductive matter in regard to its function of capturing energy from the environment, as well as the structure of the electromagnetic fields, the concepts of voltage and electric current and their deficiencies. Taking into consideration that the motors of the present state of the art are said to have these resistive forces as intrinsic to their functioning, today's projects are oversized and their electric consumption is more elevated than they should, which contributes to cause negative impact over the environment. As technicians in the field are aware, one of the main problems in the world today is the scarceness of natural resources for power generation, besides the quantity of pollutants sent off to the atmosphere caused by the burning of fossil fuels.

In order to briefly clarify the bases of the invention, according to the theories and concepts researched and developed by Keppe (refer to "The New Physics Derived From A Disinverted Metaphysics", Keppe, Norberto da Rocha, published 1996, Proton Publishing House, Paris) the present invention is based on the hypothesis that matter captures and transforms immaterial energy, called essential energy, into secondary forms of energy, namely electricity and magnetism.

In short, besides other concepts explored by Keppe, the author holds that the essential energy, in the case of the magnetic fields, is twofold and bidirectional, i.e., it always acts in two equal components, but in opposite and complimentary directions.

More specifically, what we know as voltage according to traditional concepts, for Keppe, means essential energy itself, so that when electric current flows through a conducting wire, caused by an electric potential difference between its terminals, in fact, just one component of the essential energy is in use. One simply ignores the power of the second component of the essential energy. As consequence to that, because this second component is totally discarded, the motors of the present state of the art present heat loss inconveniences. In other words, the electromagnetic motors of the present state of the art utilize the energy generated by the magnetic field during the electric current input, ignoring or discarding the second component of the essential energy, i.e., the back energy derived from the collapsing of the magnetic field, which also involves higher voltage/current peaks in opposite direction to those supplied by the power supply.

BRIEF DESCRIPTION OF THE INVENTION

Therefore, intending to overcome deficiencies and solve the problems hereinbefore mentioned in relation to the electric motors of the state of the art, the electromagnetic motor, object of the present invention, was developed.

More specifically, it is the goal of the present invention an electromagnetic motor that can replace any other motor powered by primary forms of energy such as electric, electromagnetic, mechanic, nuclear, piezoelectric, sonic, thermal, luminous, hydraulic, pneumatic, chemical, electromagnetic induction, combustion of fossil fuels, biofuels, etc., preferably those designed to deliver torque.
Yet, another goal of the invention is an electromagnetic motor with technical and functional characteristics that can diminish, or even eliminate in specific cases, the resistive forces acting against the movement of the rotor through the application of the concepts developed by Keppe.

Yet, the present invention has for goal an electromagnetic motor which, besides utilizing the energy generated by the electric current flow inside the wires of a coil, captures and uses the essential energy in its complete form, i.e., a motor designed to capture and use the two components of the essential energy trapped in the magnetic fields.

In this way, it is the goal of the invention an electromagnetic motor that does not heat up and makes it possible for the manufacture of wireless versions of many electric household appliances which are traded only with wires and currently designed be plugged to 110/220V domestic electric outlets, like for example, fans, vacuum cleaners, mixers, etc.

It is also object of the invention an electromagnetic motor that enhances the useful life of conventional batteries utilized in wireless devices and power tools, without diminishing their mechanical power.
Yet, the electromagnetic motor of the invention is more efficient, which reduces considerably the manufacturing costs of electric equipment that embodies motors, for it is possible to reduce their size and, consequently use less material to manufacture them. Additionally, it is the objective of the invention a motor that can be adapted to work as a power generator, small or big, and help save energy in electric power plants based on primary driving energies such as radioactive material, water potential, wind potential, sun, coal etc. The electromagnetic motor according to the invention can, still, be easily adapted to replace hybrid (fuel/electricity) motors currently developed for the car, nautical and aircraft industry, for its capacity and work potential are considerably superior to those of the conventional motors, in addition to consuming less electric energy.

In order to reach the goals hereinbefore proposed, the electromagnetic motor of the present invention is equipped to utilize the essential energy in its integrality, particularly its second component, here called back component, or back energy, which is obtained both 1) through the collapse of the magnetic field caused by draining off the energy trapped inside the stator coils when the electric current input ceases and 2) the high voltage peaks caused by switching on and off the input current to the coils.

More specifically, the electromagnetic motor of the present invention works with electric current

pulses provided by a power supply in closed circuit that feeds the wires of stator coils, inside which there is a magnetic rotor. The pulses are controlled by means of sensors duly positioned so as to determine the exact instant of the pulses, making possible the capturing and harnessing of the said back energy.

BRIEF DESCRIPTION OF THE FIGURES

The objectives and technical effects attained by the electromagnetic motor, object of the present invention, shall be clear to technicians of the field, starting with the following detailed description referring to the enclosed sketches, in which:

- Figure 1 illustrates the basic setup of the electromagnetic motor according to the present invention;

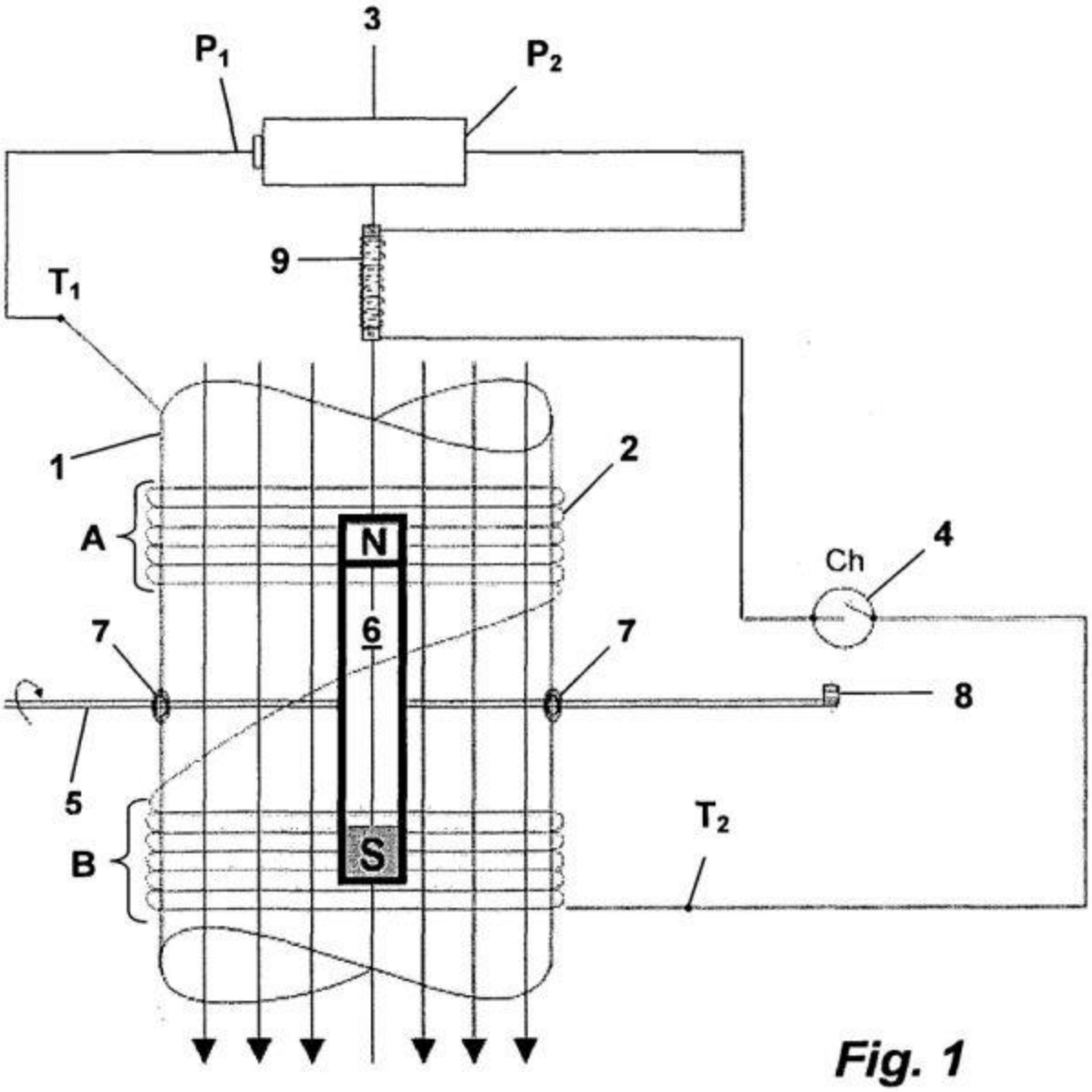
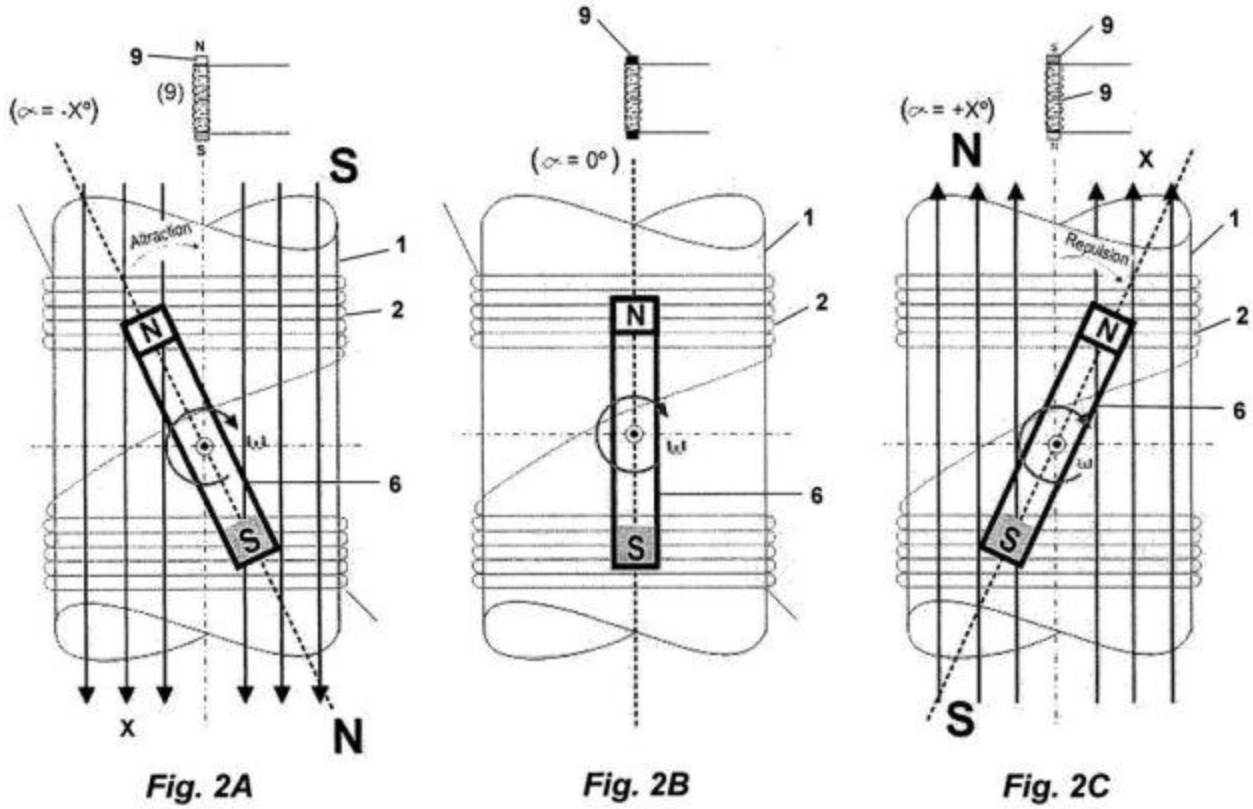
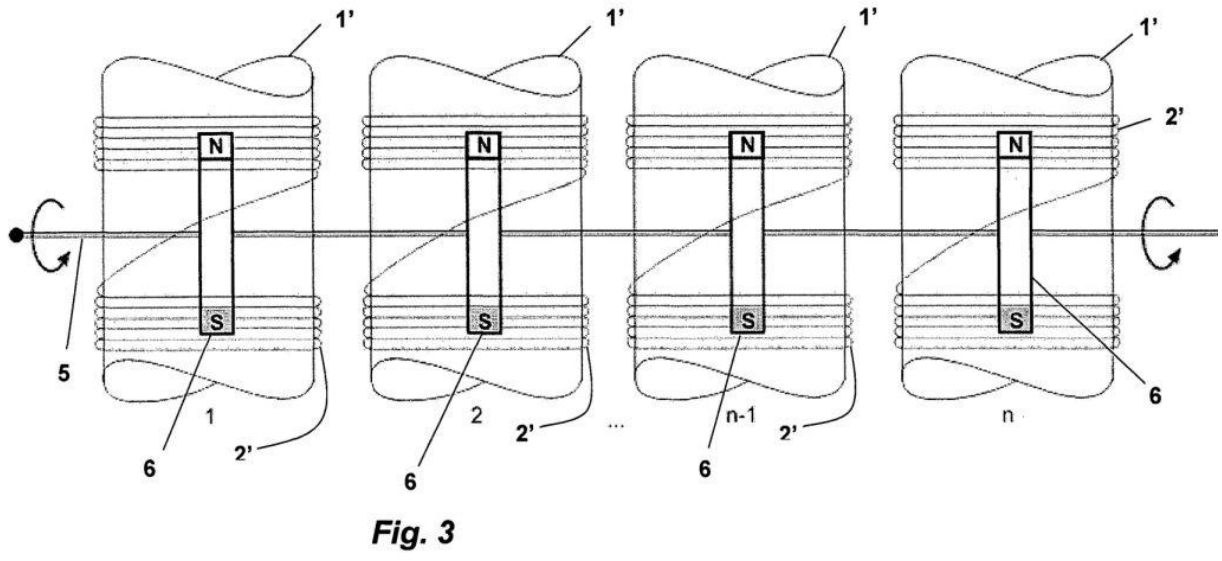


Fig. 1

- Figures 2A, 2B and 2C illustrate the movement sequence of the rotor of the electromagnetic motor in accordance with the invention;



- **Figure 3** illustrates an optional design of the electromagnetic motor of the invention;



- **Figure 4** illustrates other construction design that utilizes electromagnetic motors according to the present invention;

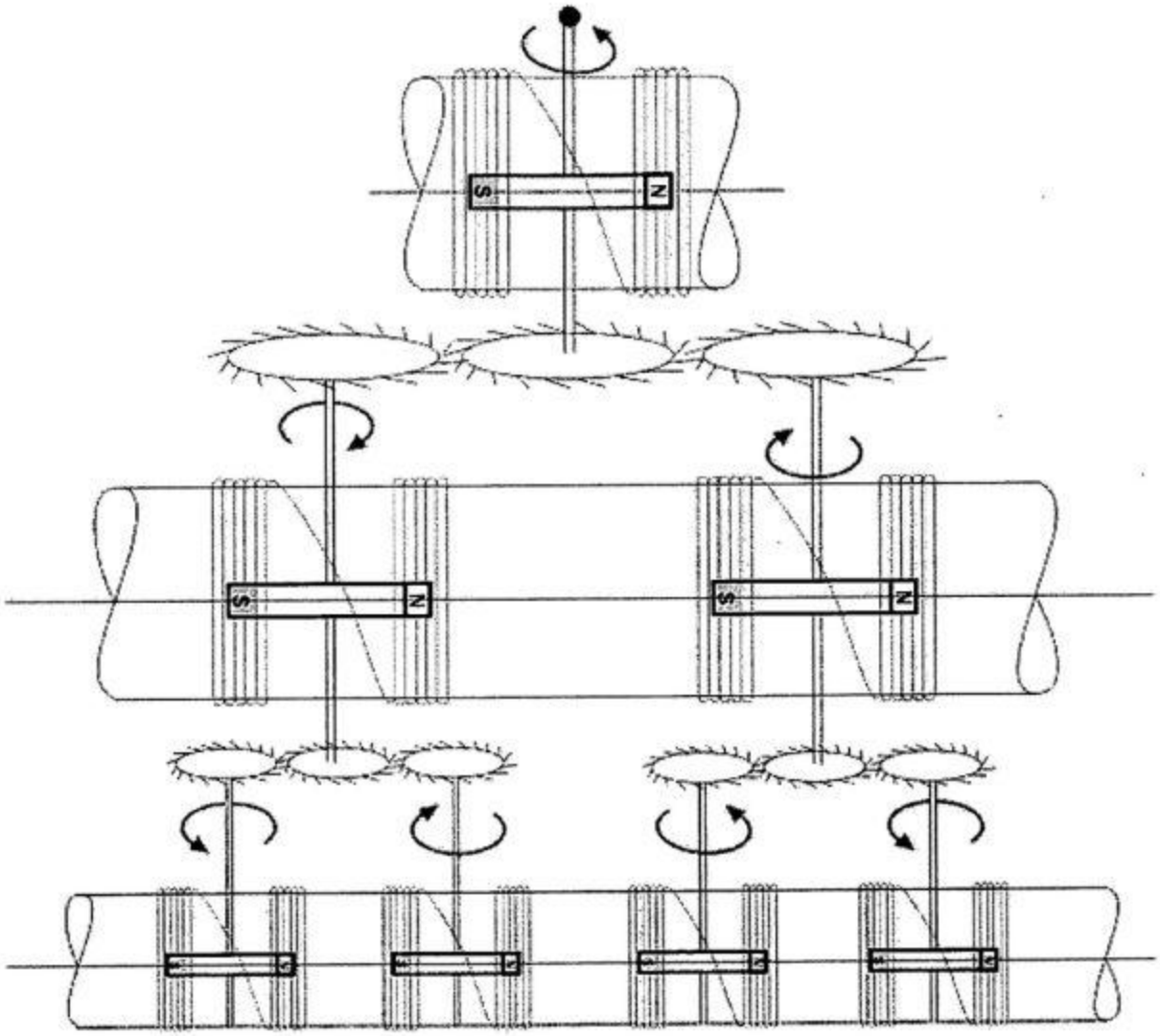


Fig. 4

- Figures 5A, 5B and 5C illustrate alternative designs for the electromagnetic motor according to the invention.

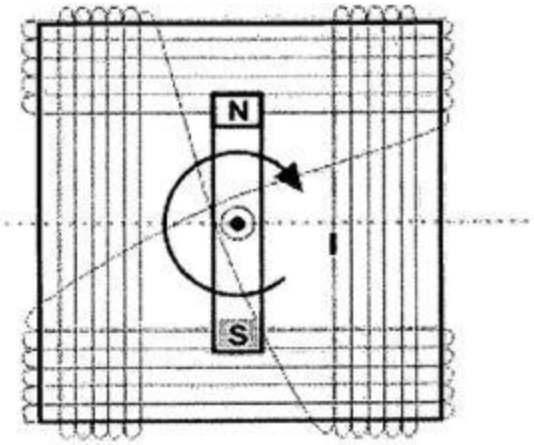


Fig. 5A

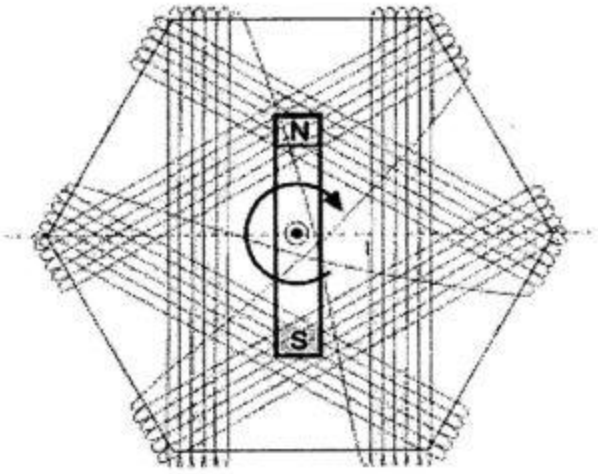


Fig. 5B

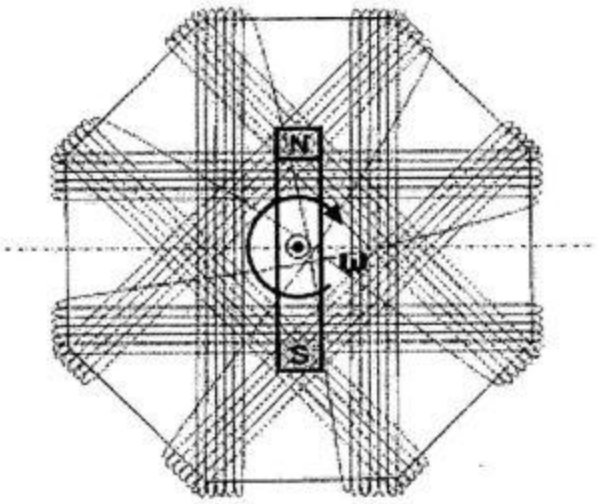


Fig. 5C

DETAILED DESCRIPTION OF THE INVENTION

The electromagnetic motor, object of the present invention comprises a structure that can utilize essential energy in its integrality. Besides the energy generated to power the stator coil during the electric current input, it also captures and uses the back energy derived from the collapse of the

magnetic field when the energy supply is switched off and the magnetic energy of the said stator coil is drained off.

More precisely, the electromagnetic motor of the present invention is equipped with simple structure features which were developed according to principles outlined by Norberto da Rocha Keppe, in the book hereinbefore mentioned.

The present invention has for goal an electromagnetic motor that generates work and mechanical torque with potential, at least equivalent to that of the conventional motors of the state of the art, but consuming less electric energy, for the electric power supply is not constant.

More preferably, in the first working model of the invention, the electromagnetic motor shown in Figure 1 is comprised of a stator 1 constituted by a coil 2 made with conducting wires whose terminals T1 and T2 are respectively connected to the positive pole P1 and negative P2 of a power supply 3, so that between the terminal T2 and the negative pole P2 there is a on/off switch 4 properly positioned on the side and close to the end of the shaft 5 of the magnetic rotor 6.

The said shaft 5 is positioned at the center and forming a right angle with the body of the stator 1 , through the ball bearings 7, so that inside the body of the said stator 1 , the shaft 5 supports the rotor 6, which is comprised of at least one permanent magnet.

Preferably, the coil 2 is formed by the windings of a conducting wire, such as copper or aluminum, in two sectors with preferably the same number of turns and axially positioned apart from one another. Figure 1 shows the said sectors A and B connected to each other and winded apart around the stator body 1.

The number of turns of each sector A and B of the coil 2 is set according to the specifications of the design, for this factor is essential to create the magnetic field desired and, consequently, the power of the motor to be developed.

Yet, according to the attached sketches and a specific design of the invention, the electromagnetic motor is powered by pulses of DC current (from batteries or rectified AC current) with duration times depending on the design. This arrangement is different from the electromagnetic motors of the state of the art that use the alternation of AC sinusoidal signals to produce the magnetic field and, consequently the incompatibility of the magnetic polarities and rotation of the rotor shaft. In addition to that, in one of the shaft ends 5, outside the stator body 1 , an actuator 8 is properly positioned to turn on and off the on/off switch 4 when the shaft 5 rotates. Preferably, the said actuator 8 is a permanent magnet whose magnetic field lies at right angle to the rotation shaft 5, and the said on/off switch 4 is a Reed-type switch that responds to the presence of the said magnetic field. The actuator 8 can be replaced to suit other switches 4 like Hall sensors, optic sensors or even discarded in the case of PWM pulsating circuits. Thus, when the shaft 5 of the rotor 6 rotates, the said actuator 8 turns on the switch 4, opening and closing the electric circuit of the electromagnetic motor of the invention, so as to provide electric current pulses to power the stator coil.

Alternatively, one (or more) synchronous pulsating electromagnet 9 can be properly positioned

to help speed up the rotation of the rotor 6. The said electromagnet 9 is preferably made of a soft iron core enveloped by a number of turns of conducting wire which generates a magnetic field to help the incompatibility between the polarities and the magnetic poles of the rotor 6, thus causing them to repel one another.

More specifically in regard to the sequence of sketches shown in Figures 2A, 2B and 2C, the electromagnetic motor of the invention works in the following way: the actuator 8, attached to the end of the shaft 5 of the rotor 6 is positioned and adjusted so that its magnetic field, when closing the on/off switch 4, is at a precise point where the angle of the shaft of the rotor 6, in relation to the magnetic field lines of the stator coil, is [alpha] = -X<0>, as shown in Figure 2A. In this exact position, the magnet of the rotor 6 starts its cycle of attraction, tending to its neutral point, where [alpha] = 0[deg.] in relation to the magnetic field lines of the stator coil, to immediately afterwards enter the drag region, whose tendency is to stop it due to the polarity of the magnetic field generated by the coil 2 and the polarity of the rotor 6. At the moment the rotor 6 reaches its neutral point, i.e., where [alpha] = 0[deg.], as indicated in Figure 2B and is ready to enter the drag region, the on/off switch 4 is switched off.

At this moment when the on/off switch 4 is off, the force of the magnetic drag ceases. Nevertheless, immediately after this neutral point, where [alpha] = +X[deg.], indicated in Figure 2C, the opposing force or back energy caused by the collapse of the magnetic field inside the stator coil 2 acts upon the rotor 6, inverting the polarity of the magnetic field and forcing the rotor 6 to move away in the attempt to reach equilibrium or the neutral point of the movement of the rotor. It must be clarified that such effect is a combined effect between the energy gained by the observed negative peaks of voltage (and current) provoked by turning on and off the switch 4, and the magnetic energy derived from the collapse of the magnetic field, which inverts polarity of the field trapped in the coil, thus exerting a force of repulsion upon the magnetic rotor 6. As indicated in Figures 2A and 2C the representative lines X of magnetic field invert direction, provoking the polarity inversion of the magnetic field of the coil 2.

Thus, according to the construction described above, the electromagnetic motor of the present invention provokes two phenomena almost at the same time due to the short time interval between the electric current pulses generated. First, when the on/off switch 4 is turned on, the battery feeds the stator coil of the motor that builds up a magnetic field proportional to the supplied voltage, which attracts the magnet of the rotor to the position of equilibrium - immediately after that, the second phenomenon takes place, when the on/off switch 4 is turned off, causing the magnetic field of the coil to collapse, which is responsible, together with the extra energy caused by the negative voltage peaks mentioned before, for the generation of the back energy, i.e., the second component of the essential energy trapped inside the coil and built up by the first component supplied by the power source. One can easily verify with the help of a scope, that the voltage corresponding to this back energy ranges from 10 to 20 times more than the supply voltage of the first component.

Besides this evident power gain due to the back energy, the fact of pulsating DC current, preferably supplied by a battery, without phase alternation like in the case of AC current supply, gives the following results: i) minimized counter electromotive force in the case of constant and low torque applications, for the magnetic rotor rotates freely along more than half the rotor cycle;

ii) minimized drag, for the magnetic field of the stator coil is turned off immediately after the rotor magnet 6 passes the point of equilibrium, which lets it rotate freely until other pulses are applied at specific points; iii) zero hysteresis, for pulsed DC has no polarity alternation to affect the magnetic dipoles of iron cores. In addition, the motor of the present invention requires no iron cores in many applications; iv) minimized eddy currents, because the magnetic fields created inside the coil 2 - both during power supply and back energy supply are parallel to the body of the motor, thus yielding close-to-zero induced currents. In addition, the stator bodies of the motor of the present invention can be made of light non-metallic and/or plastic-like materials that greatly reduce the negative effects of eddy currents.

Besides the reduction and/or elimination of hysteresis and eddy currents losses, the inventors remark that heat losses in the conductors caused by the Joule effect are also greatly minimized because the magnetic rotor in movement, builds up and maintains its own alternating magnetic field inside the stator coils, which, together with the second component of the essential energy, maintains more magnetic energy trapped in the stator coils, thus reducing the current flow necessary to apply the same torque to the shaft. Consequently, there is no considerable temperature rise, which improves both efficiency and useful life of the motor, for there is no risk of overheating.

Besides this, as one can observe, during the functioning of the electromagnetic motor according to the invention, the power supply 3 is not constantly active, for it only inputs energy into the circuit when the pulses are given by the actuator 8 upon the on/off switch 4. As result, the consumption of the battery is greatly reduced when compared to the motors of the state of the art, and this allows new battery-built-in designs for currently non-portable equipment. Thus, in short, the electromagnetic motor, object of the invention, is designed in principle to capture and harness energy generated by the collapse of the magnetic field which takes place when the energy contained in the coil 2 is drained off. Such energy is responsible for the inversion of polarity of the magnetic field that acts upon the magnetic rotor.

Figures 3 and 4 illustrate alternative constructions comprised of a series of electromagnetic motors according to the present invention. Figure 3 shows the combination of a series of rotors 6<1> sitting side by side along the same shaft 5'. Each rotor 6' rests inside its own stator coil, so as to add torque at the shaft ends.

This design is particularly used for power equipment with longitudinal bodies, because the association of individual torques in the same shaft adds. This combination can work with lower voltages than those used for conventional motors and thus operate with batteries and reach high efficiency. In addition, the use of higher voltages increases torque considerably.

Figure 4 is a sketch of another combination of motors interconnected by means of gears 10, which depending on their rate, can increase or diminish torque (or speed) at the ends of the rotating shaft.

Through this alternative design, the phenomenon of resonance causes the motors to interact with one another at distance, still increasing the efficiency of the mechanical system as a whole. In other words, besides the action of the coils upon the magnetic rotors, the entire system benefits

from the resonance between the magnetic rotors. As result, torque and consumption are optimized. More specifically Figures 5A, 5B and 5C depict alternative designs for the electromagnetic motor of the present invention, all of them with the purpose of achieving better efficiency and consequently work capacity. In these assemblies one observes that the disposition of the coils is altered to increase the number of pulses that generate voltage peaks and electric current along one cycle of the rotor.

Figure 5A illustrates an assembly in which coil 2 is comprised of four sectors axially positioned and 90 degrees out of phase, so that two pulses are generated along the rotation cycle of rotor 6. This is called biphasic assembly.

Figure 5B shows an assembly in which the coil comprises six sectors out of phase with each other, so that the feeding pulses of electric current are applied in three specific points of the rotation cycle of the rotor. In this case the electromagnetic motor is called triphasic assembly. Figure 5C shows a construction in which the coil 2 is divided into eight out-of-phase sectors, which requires four pulsation points along the rotation cycle of the rotor, being called tetraphasic assembly.

These arrangements are more compact, and their configurations take advantage of more pulses (direct and back - in both directions of the coil) along the same cycle of the rotor, which speeds up the rotor and stabilizes torque when heavier loads are applied to the shaft.

As a practical example of the advantages and technical effects given by the electromagnetic motor according to the present invention when compared to the conventional motors known in the state of the art, one can utilize any electrical receptor like for example a domestic fan.

A typical and regular medium size domestic fan found in the market today is designed to consume around 120W of energy (P). The voltage (U) of the public power grid used for such devices is usually 127V (or 220V). Let's consider it 120V for easy calculation. Therefore, according to basic electrical theories, the electric current (i) flowing through the motor of this fan is 1 Amp, because: $i = P / U = 120W / 120V = 1A$

In other words, this electric appliance requires 1 Ampere of electric current to produce 120W power, which rotates the fan at a certain speed. When this motor of the state of the art was actually replaced by one equivalent electromagnetic motor of the present invention, it was possible to obtain the same mechanical work (i.e., the fan rotating at the same speed) with two 12V batteries in series (24V total voltage) and only 0.5 Amp flowing through the motor of the fan. Therefore, the power required by the motor of the fan to produce the same mechanical work was:

$P = U \times i = 24 \times 0.5 = 12W$

The comparison between the two fans, one with the conventional motor of the state of the art and the other with the electromagnetic motor of the present invention, revealed that this latter is about ten times more efficient (consumed 10 times less energy) than the motor of the current state of the art, due to the fact that the electromagnetic motor of the present invention is able to

harness the back energy captured by the voltage peaks together with the collapse of the magnetic field trapped inside the coil, when the electric power supply is turned on and off at precise positions, as mentioned hereinbefore.

Alternatively, the rotation shaft of the electromagnetic motor in concern can be attached to a mechanism that, through the mechanical torque generated by the motor, works as a power generator. In addition, the adaptation in concern can be attached to, or even replace generators ran on primary sources of energy. Although the present invention is described in relation to the motors utilized in devices called electric receptors, it is possible, also, to wind a second coil around the first coil, so that the second coil captures the back energy by induction and stores it in capacitors, recharges batteries or uses it for torque.

Thus, in regard to all of what has been exposed hereinbefore, it is clear that the electromagnetic motor, object of the present invention, can obtain a substantial energy gain, due to voltage peaks and magnetic field collapses, as well as considerable reduction of losses, considered intrinsic to the motors of the current state of the art.

WO 2009140750

ELECTROMAGNETIC MOTOR AND EQUIPMENT TO GENERATE WORK TORQUE

FIELD OF INVENTION

The present invention refers to a cold and high efficiency electromagnetic motor capable of increasing considerably the electromagnetic and/or mechanical potential energy available to be used in all equipment supplied with energy in a primary forms. More specifically, the invention refers to a motor, or even a generator, which comprises structure and functioning characteristics that reduce the consumption of electrical energy and, at the same time, produces equivalent and even superior mechanical potential and torque in relation to conventional motors.

In addition, the motor, object of the present invention has a more simplified structure that can be applied to any electrical device, specially those called electrical receptors, designed to produce, at least, the same power efficiency, but consuming less energy, without risks of overheating the equipment and, yet, reducing manufacture costs of the said devices.

Besides, the electromagnetic motor of the present invention solves a number of today's problems related to the use of conventional energy sources and the scarceness of electric energy, for it has the ability to deliver the same power, consuming less energy.

BACKGROUND OF THE INVENTION

Many types of electromagnetic motors are known today, and they are designed to deliver mechanical power - torque, from the interaction of magnetic components of a closed circuit supplied with electric current. All these motors known in the prior art are developed according to

scientific principles, laws and theories pertaining to traditional physics and electricity, and considered universal, natural and inflexible laws, i.e., immutable. Nevertheless, scientific theories are limited to the understanding of the scientists who elaborated them, for example: Newton's laws, Ohm's laws, laws of thermodynamic, etc.

Therefore, it must be clear that a different perspective of the conventional scientific philosophy can lead to a new understanding of physics and an upgraded technology, which is able to give a practical solution to problems which are, so far, considered as intrinsic factors to a specific physical process.

In this context, it is worth to mention that the machines have basically, as a principle, the consumption and transformation of a certain type of energy in, basically energy considered as loss, usually heat, inherent to its functioning and, in the availability of any other type of energy that is considered useful to the aimed finality.

Thus, it is also known that electric motors are defined as machines that are powered by energy in its electric form supplied by a power source, i.e., the mains power supply with alternating current (single-phase, bi-phase, three- phase) or batteries and solar cells with direct current, in such a way that the referred electric energy is transformed in energy in its heat form, denominated as a loss provoked by attrition, magnetic drag, hysteresis, eddy currents, joule effects, etc., and finally by the energy supply in its mechanical form, useful and available for work that is related to the torque and rotation of the motor shaft. Conversely, it is also known that electric generators are powered by some type of primary energy, as for example, chemical combustion (diesel, gasoline, gas, alcohol, etc) or mechanical (hydraulic power, wind power, etc.), and transform in losses in the form of heat and electric current in the output to feed other equipment.

Thus, in machines of such a nature, its yield or efficiency is calculated by the ratio between the output and the input. Merely as an illustration, if a motor consumes 60W of the mains power supply and produces 3OW of mechanical work, its efficiency is given by the ratio 30W/60W, that corresponds to 0.5 or expressed in percentage, 50%.

The same way, the generator that is powered by 1 KW of mechanical power that can be supplied by a waterfall with constant "Q" flow in m<3>/s, from a "h" height and that generates 850W of electric energy in the output will have an efficiency of 850W/1.000W, that corresponds to an efficiency of 0.85, or in percentage, 85%.

In this context, there are many types of electric motors, however the electromagnetic motors which are currently the most used due to its easy construction are known as induction motors that, however, have a squirrel-cage type rotor or a coil rotor.

In general, the cage rotor induction motors comprise a cylinder rotor made of metal (aluminum, for example) - or shorted out coils mounted on the said metallic cylinder, surrounded by electromagnets which are fed with electric AC current to generate a first variable magnetic field, so as to obtain electromagnetic induction. The magnetic field produces a current on the surface of the metallic cylinder (or shorted out coils), which, in turn, produces its own magnetic field. These two magnetic fields (from the rotor and the stator) interact, by pulling and pushing each

other, causing the cylinder to rotate and, consequently, deliver the mechanical power to the rotor shaft. The electric motors with rotor coils comprise a number of copper wire coils mounted both on a metallic cylinder rotor and a stator, through which, usually flows an alternating electric current (AC), generating magnetic fields that attract and repel each other the variable fields of the rotor. Due to the polarity alternation of the magnetic field in synchronicity, the rotor spins and delivers mechanical power.

According to the prior art the electromagnetic motors are usually based on two phenomena, as follows: 1) when we apply electric current through a conducting wire, the magnetic field is generated by the conducting material; and 2) if a conducting wire is exposed to a variable magnetic field, it will present an electric potential difference in both of its ends, and the electric current generated inside the conductor forms, in turn, a magnetic field which opposes to the external field that caused it. In addition to that, the electric motors of the prior art are constantly fed with electricity, in order to generate the polarity alternation of the magnetic components intending to obtain the attraction/repulsion effect. Obviously, this process, in order to keep the rotor spinning under load (torque applied to the shaft), requires high energy consumption. As consequence, heat losses are inevitable, i.e., with the so-called losses or transformation in heat energy.

Thus, in view of the foregoing, particularly due to the action- reaction interactions, it is possible to note that the prior art electromagnetic motors considering that the intrinsic heat losses are impossible to
be avoided. In other words, the alternating magnetic fields produced by the passage of alternating electric current through the stator and rotor coils of the motors cause them to heat up in the same proportion to the intensity and variation rate of these fields.

Because of that, when an electric motor is fed by any kind of power source - either battery or AC power public grid - the simple free-load spin of the shaft involves some mechanical torque, which reacts to the electric power supply circuit and represents a line voltage drop, against the feeding energy of the motor, tending to stop it. This voltage drop is technically known as counter electromotive force (back emf). Nevertheless, to each mechanical load added to the line of the motor, the extra electric power required to overcome it will represent an increase in the back emf, i.e., a resistance increase, in such a way that the feeding source supply more power in order to overcome the load resistance. As consequence to that, the temperature of the windings rises and causes the efficiency of the motor to drop. In case the mechanical load is too high and exceeds its project limit value, overheating takes place and the motor burns.

In this sense, again it is observed that the continuous supply of electricity (AC or DC) to the conventional motors involves a series of problems, especially those related to the overheating and performance drop.

According to the scientific theories utilized to develop these electromagnetic motors, four intrinsic and opposing forces to the movement of the motor are considered, as follows: counter electromotive force, magnetic drag, hysteresis and eddy currents. All of these resistive forces result in heating and possible burning of the motors when they are subjected to heavy loads, for they demand continuous electric supply from the power source.

After the above explanations, the inventors claim, in spite of acknowledging the theoretical concepts known today, and complement that the same are incomplete, because they ignore the essential physical characteristics of the magnetic matter and/or electric conductive matter in regard to its function of capturing energy from the environment, as well as the structure of the electromagnetic fields, the concepts of voltage and electric current and their deficiencies.

Taking into consideration that the motors of the state of the art are said to have these resistive forces as intrinsic to their functioning, today's projects are oversized and their electric consumption is more elevated than they should, which contributes to cause negative impact over the environment.

As technicians in the field are aware, one of the main problems in the world today is the scarceness of natural resources for power generation, besides the quantity of pollutants discharged to the atmosphere caused by the burning of fossil fuels.

In order to briefly clarify the bases of the invention, according to the theories and concepts researched and developed by Keppe (refer to "The New Physics Derived From A Disinverted Metaphysics", Keppe, Norberto da Rocha, published 1996, Proton Publishing House, Paris) the present invention is based on the hypothesis that matter captures and transforms immaterial energy, called essential energy, into secondary forms of energy, namely electricity and magnetism.

Summarizing, besides other concepts explored by Keppe, the author holds that the essential energy, in the case of the magnetic fields, is twofold and bidirectional, i.e., it always acts in two components, but in opposite and complimentary directions. More specifically, what we know as voltage according to traditional concepts, for Keppe, means essential energy itself, so that when electric current flows through a conducting wire, caused by an electric potential difference between its terminals, in fact, just one component of the essential energy is in use, ignoring the power and capacity of the second component of the essential energy. As consequence to that, because this second component is totally discarded, the motors of the current prior art present inconveniences related to heat loss.
In other words, the electromagnetic motors of the present state of the art utilize the energy generated by the magnetic field during the electric current input, ignoring or discarding the second component of the essential energy, i.e., the back energy, expressed by transients in the line, direct and reverse peaks, at the moment of the building up and collapsing of the magnetic field of the motor coils.

DESCRIPTION OF THE INVENTION

Therefore, intending to overcome deficiencies and solve the problems hereinbefore mentioned in relation to the electric motors of the prior art, the electromagnetic motor, object of the present invention, was developed. More specifically, it is the objective of the present invention an electromagnetic motor that can replace any other motor powered by primary forms of energy such as electric, electromagnetic, mechanic, nuclear, piezoelectric, sonic, thermal, luminous, hydraulic, pneumatic, chemical, electromagnetic induction, combustion of fossil fuels, biofuels,

etc., preferably those designed to deliver torque.

Yet, another objective of the invention is an electromagnetic motor with technical and functional characteristics that can overcome, or even eliminate in specific cases, the resistive forces acting against the movement of the rotor through the application of the concepts developed by Keppe. Yet, the present invention has the objective of an electromagnetic motor which, besides utilizing the energy generated by the electric current flow inside the wires of a coil, captures and uses the essential energy in its complete form, i.e., a motor designed to capture and use the two components, action and complementation, according to Keppe, of the essential energy trapped in the magnetic fields.

In this way, it is the objective of the invention an electromagnetic motor that does not heat up and makes it possible for the manufacture of wireless versions of many electric household appliances which are traded only with wires and currently designed be plugged to 110/220V domestic electric outlets, like for example, fans, vacuum cleaners, mixers and many other low power home appliances.
It is also object of the invention an electromagnetic motor that enhances the useful life of conventional batteries used in wireless devices and power tools, without reducing their mechanical power.
Yet, the electromagnetic motor of the invention is more efficient, which reduces considerably the manufacturing costs of electric equipment that embodies motors, for it is possible to reduce their size and, consequently use less material to manufacture them.

Additionally, it is the objective of the invention a motor that can be adapted to work as a power generator, small or big, and help save energy in electric power plants based on primary driving energies such as radioactive material, water potential, wind potential, sun, coal etc. Besides, it is the scope of the present invention a motor that can be used in its generator mode in order to recuperate the electromagnetic energy accumulated in the coil(s) and send it back to the coil(s), generating a second power source independently from the first source, which can be a battery, the mains power supply or any other. Most precisely, this alternative performance of the motor in the present invention can be denominated as an electromagnetic feedback system or electromagnetic turbo system, which comprises the coupling of one or more capacitors in the output of one or more coils of the basic embodiment of the motor object of this invention. The electromagnetic motor according to the invention can, still, be adapted to replace hybrid (fuel/electricity) motors currently developed for the car, nautical and aircraft industry, for its capacity and work potential are considerably superior to those of the conventional motors, in addition to consuming less electric energy as well as it allows the generation of feedback energy.

In order to achieve the above indicated objectives, the electromagnetic motor of the present invention is equipped to use the essential energy in its integrality, particularly its second component, here called back component, back peak or back energy, which is obtained both 1) through the collapse of the magnetic field caused by draining off the energy trapped inside the stator coils when the electric current input ceases and 2) the high voltage peaks caused by switching on and off the input current to the coils. More specifically, the electromagnetic motor of the present invention works with electric direct current pulses provided by a power supply in closed circuit that feeds the wires of stator coils, inside which there is a magnetic rotor, coiled

and made of permanent magnets. The pulses are controlled by means of sensors duly positioned so as to determine the exact instant of the pulses, making possible the capturing and harnessing of the said back energy. In the alternative construction, capacitors can be added to the motor line so that its work resonance can be achieved.

More specifically the increase of work power in the motor- generator proposed in the alternative construction of the present invention is obtained when the motor initiates its movement through the primary mains power supply (rectified current) or through one or more batteries, that power, respectively the motor coil(s) through a pulse of energy that interact, on its (their) turn, with one or more magnetic or electromagnetic rotors fixed in the rotation shaft, resulting in the rotation of said shaft. In this sense, the alternating current generated in the terminals of said coil(s) that involves one or more rotating magnetic or electromagnetic rotors is rectified, in a half wave or complete wave and deviated to one or more capacitors, or even to a capacitor bank, that on their turn are able to accumulate a voltage superior to the input primary power voltage of the first motor pulse. This amplified voltage in the capacitor(s) is used as a second direct current power source, being completely independent from the primary power source and corresponding to the power (electricity) generator aspect of the present invention. The capacitor(s) positive and negative outputs are dully connected to the motor coil terminals that supply sufficient current and electric charge to power one or more extra pulses in the coil(s) when the rotor is in the appropriate phases in relation to them, in order to contribute to the rotation of the rotor. Finally, by coupling one or more motors/generators in the same shaft, with two coils duly connected in a series or in parallel, one in able to increase indefinitely the gain of energy produced by the generator aspect of the present construction in relation to the energy consumed by the motor aspect of the present construction. In other words, with the proposed feedback, the efficiency of the present motor is not limited anymore to only 100%.

BRIEF DESCRIPTION OF THE FIGURES

The objectives and technical effects attained by the electromagnetic motor and generator, object of the present invention, shall be clear to technicians of the field, starting with the following detailed description referring to the enclosed drawings, in which:

- Figure 1 illustrates the basic embodiment of the electromagnetic motor according to the present invention;

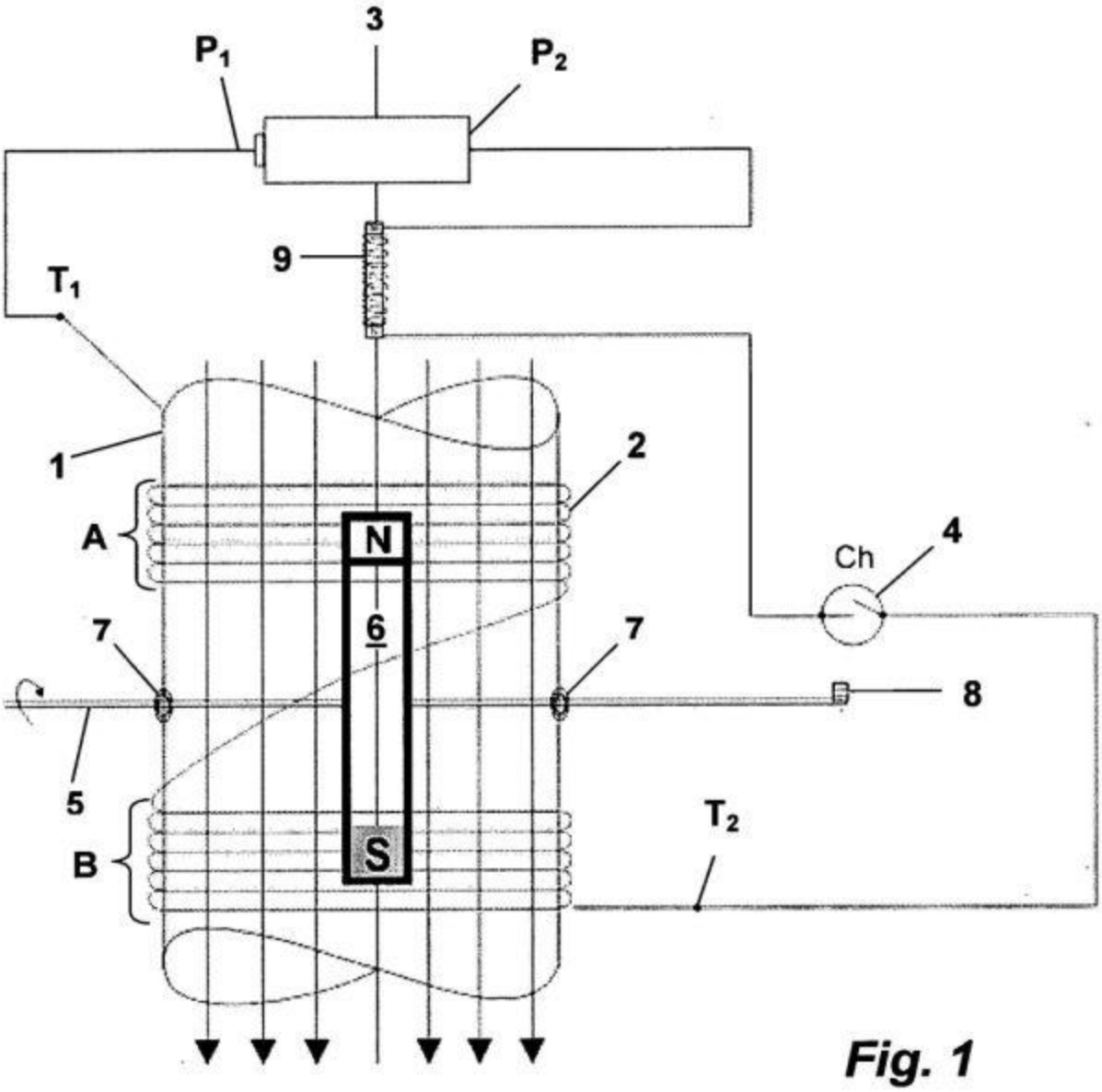
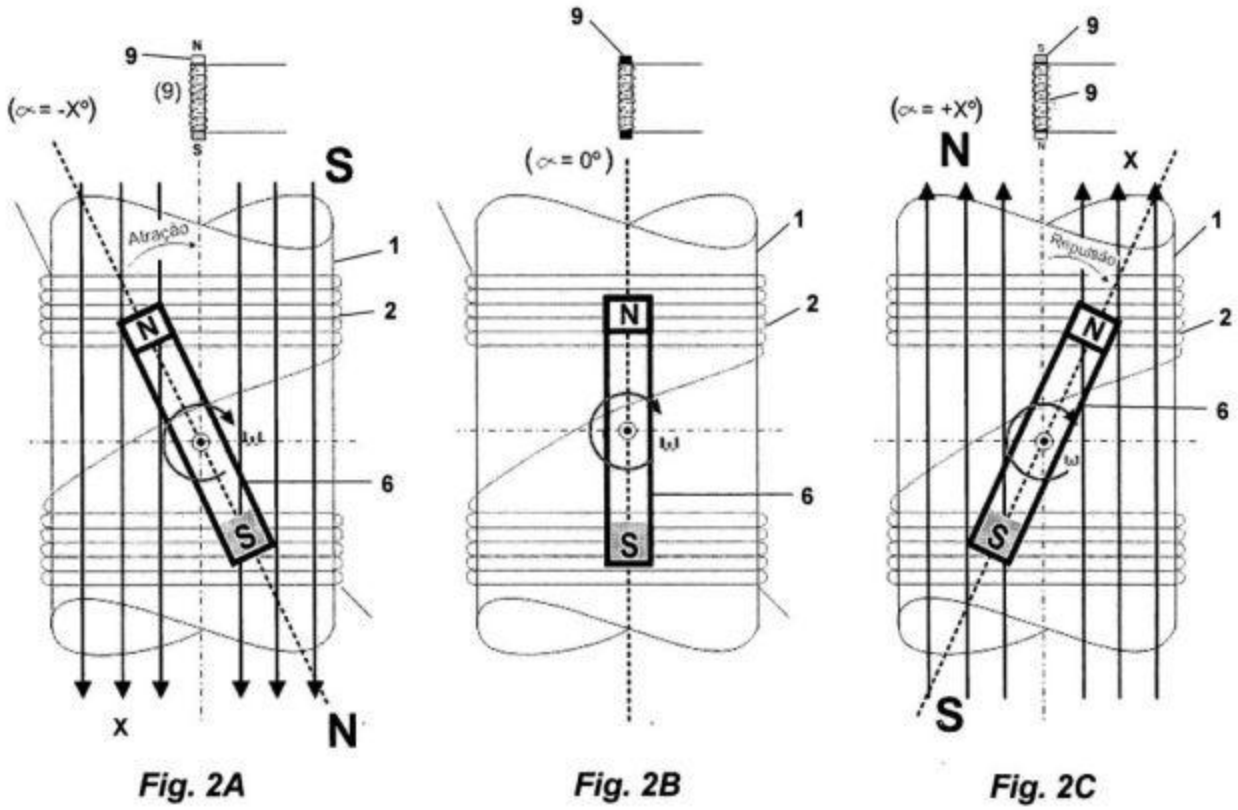


Fig. 1

- Figures 2A, 2B and 2C illustrate the movement sequence of the rotor of the electromagnetic motor in accordance with the invention;



- **Figure 3** illustrates an alternative embodiment of the electromagnetic motor of the invention;

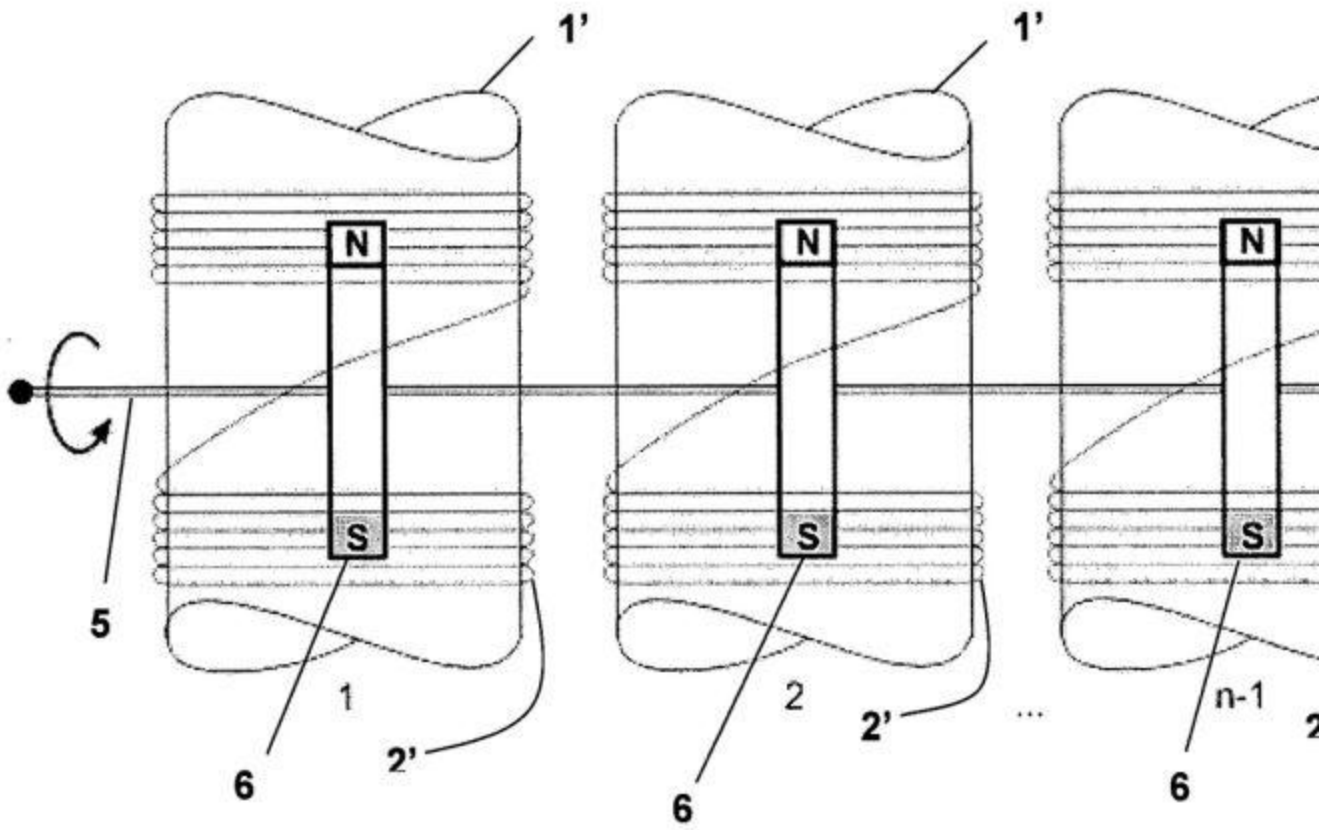


Fig. 3

- Figure 4 illustrates other alternative embodiments that use electromagnetic motors according to the present invention;

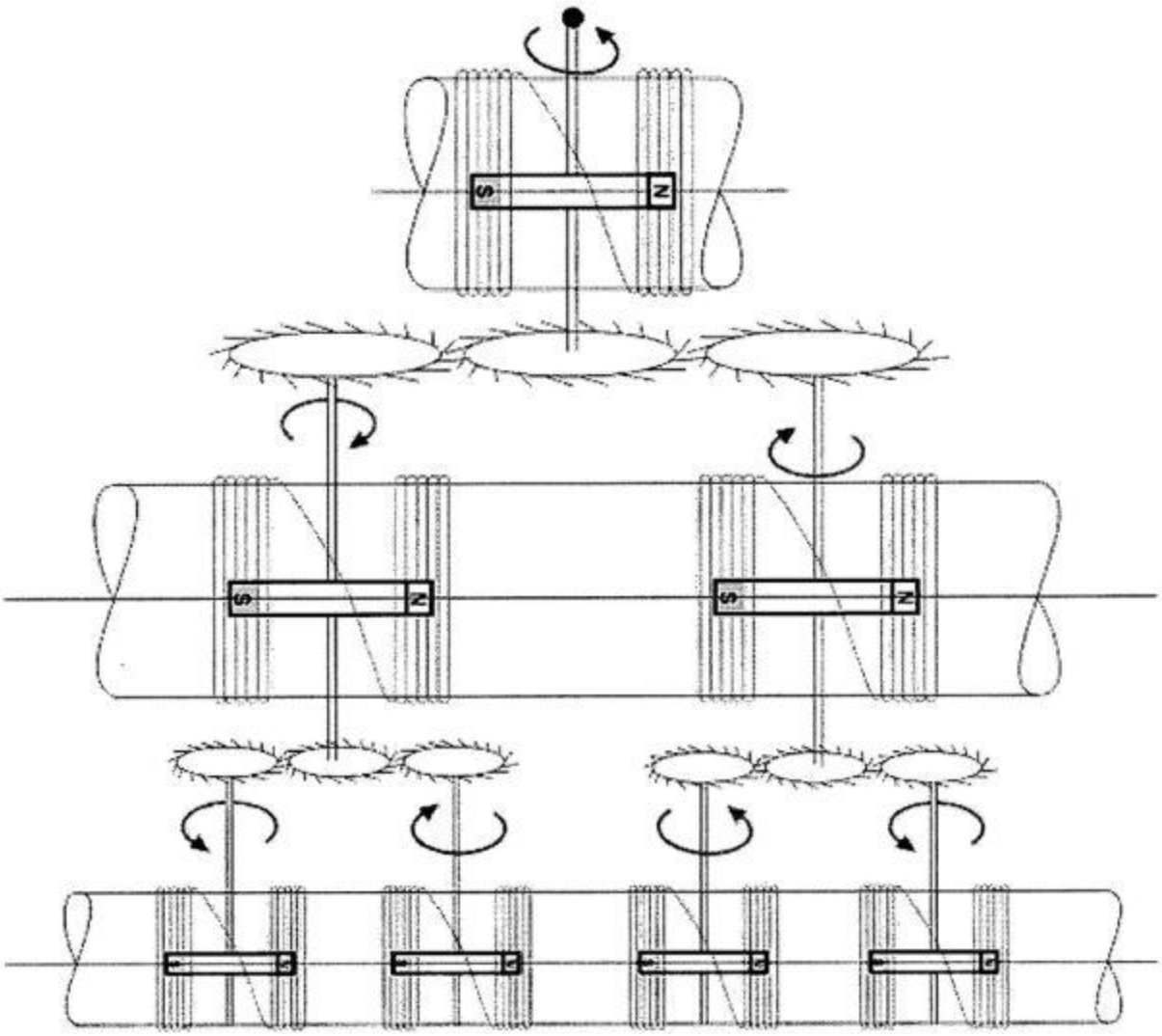


Fig. 4

- Figure 5 illustrates an alternative embodiment t o the motor illustrated in Figure 1 with a feedback system according to the present invention;

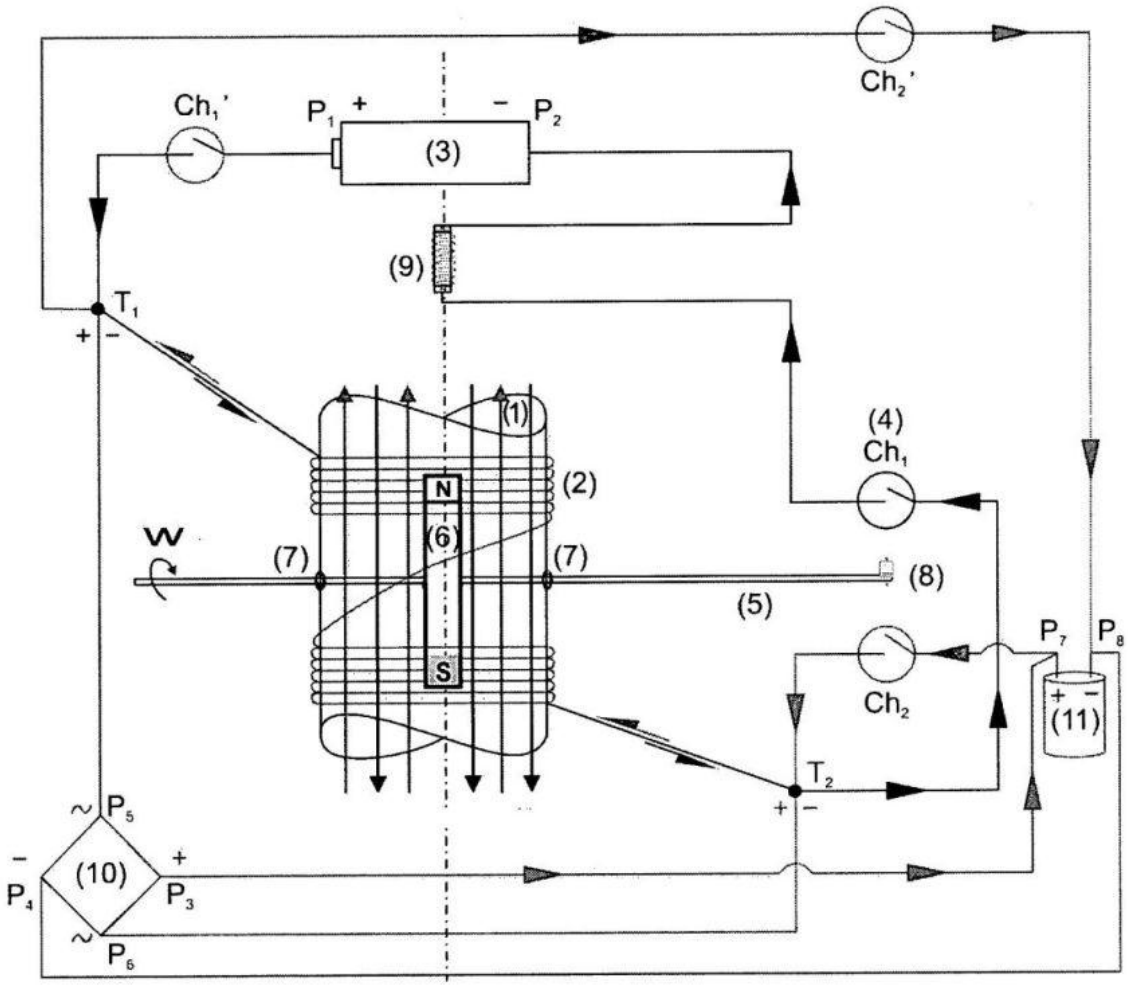


Fig. 5

- Figure 6 illustrates a preferred rotor construction, according to the present invention;

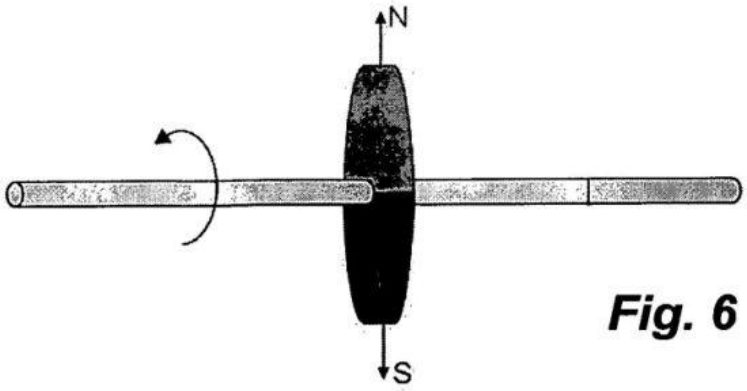


Fig. 6

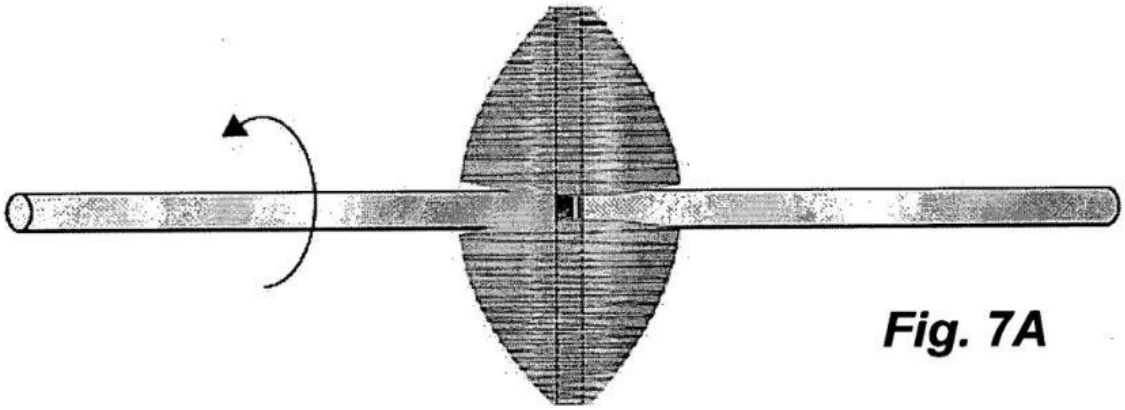


Fig. 7A

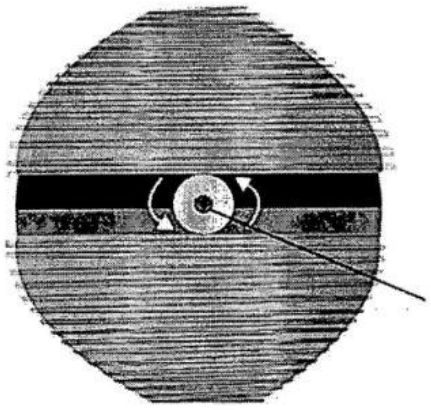


Fig. 7B

- Figure 7A and 7B illustrates a preferred construction of the primary motor coil, according the present invention;

- Figures 8A, 8B, 8C 8D and 8E illustrate alternative embodiments for the electromagnetic motor according to the invention.

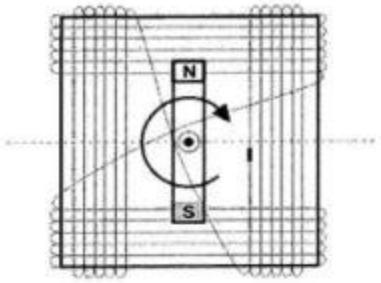


Fig. 8A

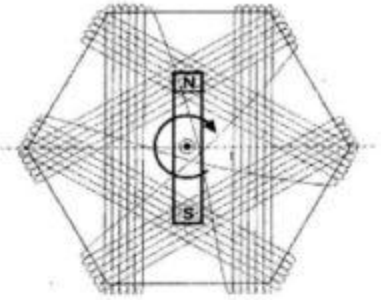


Fig. 8B

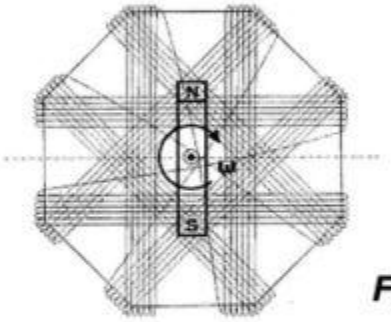


Fig. 8C

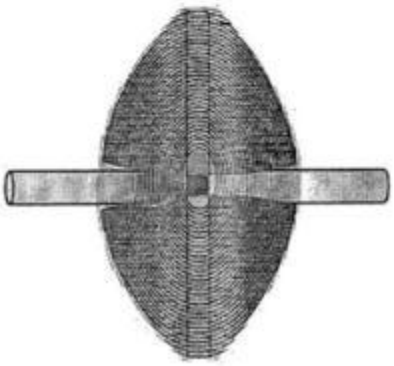


Fig. 8D

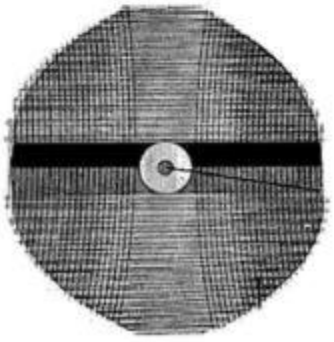


Fig. 8E

DETAILED DESCRIPTION OF THE INVENTION

The electromagnetic motor, object of the present invention comprises a structure that can use the

essential energy in its integrality. Besides the energy generated to power the stator coil during the electric current input, it also captures and uses the back energy derived from the collapse of the magnetic field when the energy supply is switched off and the magnetic energy of the said stator coil is drained off.

More precisely, the electromagnetic motor of the present invention comprises simple structure features which were developed according to principles outlined by Norberto da Rocha Keppe, in the book mentioned above. The present invention has for objective an electromagnetic motor that generates work and mechanical torque with potential, at least equivalent to the conventional motors of the prior art, but consuming less electric energy, since the electric power supply is not constant, and yet it can promote the feedback of the motor. More preferably, in the first embodiment of the invention, the electromagnetic motor shown in Figure 1 is comprised of a stator 1 constituted by a coil 2 made with conducting wires whose terminals T1 and T2 are respectively connected to the positive P1 and negative P2 poles of a power supply 3, so that between the terminal T2 and the negative pole P2 there is a on/off key 4, or switch properly positioned on the side and close to the end of the shaft 5 of the magnetic rotor 6.

The said shaft 5 is positioned at the center and forming a right angle with the body of the stator 1 , through the bearings 7, so that inside the body of the said stator 1 , the shaft 5 supports the rotor 6, which is comprised of at least one permanent magnet.

Preferably, the coil 2 is formed by the windings of a conducting wire, such as copper or aluminum, in two sectors with preferably the same number of turns and axially or radially positioned apart from one another.

Figure 1 shows the said sectors A and B connected to each other and winded apart around the stator body 1.

The number of turns of each sector A and B of the coil 2 is set according to the specifications of the motor design in order to reach the resonance of the rotor/coil(s) pair, depending on the characteristics and power desired.

Yet, according to the attached drawings and a specific design of the invention, the electromagnetic motor is powered by pulses of DC current (from batteries or rectified AC current) with duration times depending on the design. This arrangement is different from the electromagnetic motors of the prior art that use the alternation of AC sinusoidal signals to produce the magnetic field (AC motors), or inversion of the direct current during the rotor cycle (DC motors) in order to obtain the magnetic fields and, consequently the incompatibility of the magnetic polarities to generate the movement of the rotor shaft.

In addition, in one end of the shaft 5, outside the stator body 1 , an actuator 8 is properly positioned to turn on and off the on/off key 4 or switch when the shaft 5 rotates. Preferably, the said actuator 8 is a permanent magnet whose magnetic field lies at right angle to the rotation shaft 5, and the said on/off switch 4 is a reed-type switch that responds to the presence of the said magnetic field. The actuator 8 can be replaced to suit other switches 4 like Hall sensors, optic sensors or even discarded in the case of PWM pulsating circuits.

Thus, when the shaft 5 of the rotor 6 rotates, the said actuator 8 turns on the switch 4, opening and closing the electric circuit of the electromagnetic motor of the invention, so as to provide electric direct current pulses to power the stator coil.

Alternatively, one electromagnet 9 can be properly positioned in order to determine the supply pulses of the electric power, making that the pulses be generated in the exact position of rotor 6 pushing it yet more in its movement.

The said electromagnet 9 is preferably made of a laminated silicon steel core enveloped by a number of turns of conducting wire which generates a magnetic field to help the incompatibility between the polarities and the magnetic poles of the rotor 6, thus causing them to repel one another.

More specifically in relation to the sequence of drawings shown in Figures 2A, 2B and 2C, the electromagnetic motor of the invention works in the following way: the actuator 8, attached to the end of the shaft 5 of the rotor 6 is positioned and adjusted so that its magnetic field, when closing the on/off switch 4, is at a precise point where the angle of the shaft of the rotor 6, in relation to the magnetic field lines of the stator coil, is [alpha] = -X<0>, as shown in Figure 2A. In this exact position, the magnet of the rotor 6 starts its cycle of attraction, tending to its neutral point, where [alpha] = 0[deg.] in relation to the magnetic field lines of the stator coil, to immediately afterwards enter the drag region, whose tendency is to stop it due to the polarity of the magnetic field generated by the coil 2 and the polarity of the rotor 6.

At the moment the rotor 6 reaches its neutral point, i.e., where [alpha] = 0[deg.], as indicated in Figure 2B and is ready to enter the drag region, the on/off switch 4 is switched off.

At this moment when the on/off switch 4 is off, the force of the magnetic drag ceases. Nevertheless, immediately after this neutral point, where [alpha] = +X[deg.], indicated in Figure 2C, the opposing force or back energy caused by the collapse of the magnetic field inside the stator coil 2 acts upon the rotor 6, inverting the polarity of the magnetic field and forcing the rotor 6 to move away in the attempt to reach equilibrium or the neutral point of the movement of the rotor. It must be clarified that such effect is a combined effect between the energy gained by the observed negative peaks of voltage (and current) provoked by turning on and off the switch 4, and the magnetic energy derived from the collapse of the magnetic field, which inverts polarity of the field trapped in the coil, thus exerting a force of repulsion upon the magnetic rotor 6. As indicated in Figures 2A and 2C the representative lines X of magnetic field invert direction, provoking the polarity inversion of the magnetic field of the coil 2.

Thus, according to the construction described above, the electromagnetic motor of the present invention provokes two phenomena almost at the same time due to the short time interval between the electric current pulses generated. First, when the on/off switch 4 is turned on, the battery feeds the stator coil of the motor that builds up a magnetic field proportional to the supplied voltage, which attracts the magnet of the rotor to the position of equilibrium - immediately after that, the second phenomenon takes place, when the on/off switch 4 is turned off, causing the magnetic field of the coil to collapse, which is responsible for the generation of

the back energy arising from the surrounding scalar field that corresponds to the complement of the first component of the essential energy trapped inside the coil and coming from the power source. One can easily verify that the voltage corresponding to this back energy is tenths times superior to the power supply voltage.

Besides this evident power gain due to the back energy (or complementary energy), the fact of pulsating DC current, preferably supplied by a battery, without phase alternation like in the case of AC current supply, gives the following results: i) minimized counter electromotive force in the case of constant and low torque applications, for the magnetic rotor rotates freely along more than half the rotor cycle; ii) minimized drag, for the magnetic field of the stator coil is turned off immediately after the rotor magnet 6 passes over the point of equilibrium, which lets it rotate freely until other pulses are applied at specific points; iii) zero hysteresis, since the feeding current is a direct and pulsed current, so there is no polarity alternation of the source; iv) minimized eddy currents, because, either there are no iron or laminated silicon steel cores in the stator coils and/or the magnetic fields created inside the coil 2 - both during power supply and back energy supply are parallel to the body of the motor, thus yielding close-to-zero the induced currents. Besides the reduction and/or elimination of hysteresis and eddy currents losses, the inventors remark that heat losses in the conductors caused by the Joule effect are also greatly minimized and consequently, there is no considerable temperature rise, which improves both efficiency and useful life of the motor (insulation), since there is no risk of overheating. Besides this, as can noticed, during the functioning of the electromagnetic motor according to the invention, the power supply 3 is not constantly active, as it only inputs energy into the circuit when the pulses are given by the actuator 8 upon the on/off switch 4. As result, the consumption of the battery is greatly reduced when compared to the prior art motors, and this allows develop new battery-built-in for currently non-portable equipment, with higher efficiency and durability.

Thus, in short, the electromagnetic motor, object of the invention, is develop take in consideration the principle of capture and harness energy generated by the collapse of the magnetic field which takes place when the energy contained in the coil 2 is drained off. Such energy is responsible for the inversion of polarity of the magnetic field that acts upon the magnetic rotor.

The Figures 3 and 4 illustrate alternative embodiments comprising a series of electromagnetic motors according to the present invention. Figure 3 shows the combination of a series of rotors 6' disposed side by side along the same shaft 5'. Each rotor 6' rests inside its own stator coil, so as to add torque to the shaft ends.

This embodiment is particularly used for power equipment with longitudinal bodies, because the association of individual torques in the same shaft adds. This combination can work with lower voltages than those used for conventional motors, and thus operate with batteries and reach high efficiency.

In addition, the use of higher voltages increases torque considerably.

The Figure 4 is a drawing of another combination of motors interconnected by means of gears 10, which depending on their rate, can increase or diminish torque (or speed) at the ends of the

rotating shaft.

Through this alternative embodiment, the phenomenon of resonance causes the motors to interact with one another at distance, still increasing the efficiency of the mechanical system as a whole. In other words, besides the action of the coils upon the magnetic rotors, the entire system benefits from the resonance between the magnetic rotors. As a result, the torque and the consumption are optimized.
In an alternative embodiment of the present invention, as illustrated especially in Figure 5, the motor of the present invention comprises a secondary circuit incorporated to the circuit of the motor illustrated in Figure 1 , being that its objective is to promote the feedback and increase the motor work power.

Most specifically, the feedback circuit is aimed at powering the stator coil(s) and/or eventually the rotors made by electromagnets so that the motor of the present invention can work as a mechanical power output amplifier. This circuit basically consists in the addition of a full wave rectifying bridge, one or more parallel capacitors and a synchronized switch system made by relays, transistors, mechanical switch or any other one.

The Figure 5 constitutes a schematic representation of how the secondary circuit is interrelated to the original basic circuit indicated in Figure 1. The circuit in black lines is the primary circuit, i.e., the one defined as basic original and similar to the one in Figure 1 , being powered by the external power source, battery or rectified mains power supply. The circuit in gray (or lighter) lines is the secondary feedback circuit by capacitive discharges, object of the present alternative embodiment.

As illustrated in Figure 5, in addition to the one illustrated in Figure 1 , introduce firstly a second switch ChV, disposed between the positive terminal P 1 of the power source 3 and the positive terminal T1 of coil 2 of the primary circuit. The ChV switch is synchronized to the Ch1 4 switch, i.e., it shall be instantaneously switched in order to be always closed when the Ch 1 4 switch is closed and it should be opened when the Ch1 4 switch is opened.

The secondary feedback circuit starts with the alternating current rectification generated by rotor 6 turning magnet in terminals T1 and T2 of coil 2. This alternating current is rectified from terminals P5 and P6 of the rectifying bridge 10, which supplies full wave direct current between the positive P3 and negative P4 terminals. These terminals are connected, respectively, to the positive P7 and negative P8 terminals of a capacitor or, alternatively, to a capacitor bank disposed in parallel 11 , configured adequately in order to meet the needs and objectives proposed herein.

The capacitor (or capacitors) 11 accumulates enough energy to keep the voltage above the primary power voltage 3 due to the increase in voltage coming from the rotor 6 turning inside the coil 2. This characteristic allows it to work as a second independent and DC power source that feeds a second pulse, inverse to the first one, and/or other pulses in other coils coiled around the same rotor 6. This process is denominated as "capacitive discharge feedback" and constitutes the turbo-electromagnetic system described hereinbefore.

The positive pole P7 of the capacitor 11 is connected to the opposite polarity terminal, i.e., the negative terminal T2 of the coil 2 through a third Ch2 switch, identical to the Ch1 4 switch of the first circuit. The capacitor's negative pole P8 is connected, on its turn, through a fourth Ch2' switch that is synchronized with Ch2, to the positive terminal T1 of the coil.

This Ch2' switch shall be switched instantly in order to be always closed when the Ch2 switch is closed and the other switches Ch1 4 and Ch1' of the other circuit are opened, and it shall always be opened when Ch2 switch is opened and the other switches Ch1 4 and Ch1' of the other circuit are closed. In other words, the primary and secondary circuits switch status work inversely, when one circuit is opened, the other should be always closed.

The closing and opening of the Ch 1 4 and Ch2 switches are excluding, i.e., both should never be closed or opened at the same time during the motor functioning.

The closing and opening of Ch 1' and Ch2' switches are synchronized with the closing and opening of Ch 1 4 and Ch2 switches respectively. Always when Ch1 4 is opened, Ch1' will be opened and always when Ch1 4 is closed, Ch1' will be closed. The same is valid for Ch2', always when Ch2 is opened, Ch2' will be opened and always when Ch2 is closed, Ch2' will be closed.

The closing moment of the main excluding switches Ch 1 4 and Ch2 is defined by the passage of the referred actuator magnet 8 fixed in the turning shaft 5 of the rotor 6. Thus, one can obtain two pulses, one directly from the power source 3 of the primary circuit and another inverse coming from the secondary circuit capacitor 11. As a result, the switches Ch 1 4 and Ch2 shall be positioned with a discrepancy of 180 degrees one from another, in such a way that when the actuator magnet 8 passes by the switch Ch1 4, due to the turning of the shaft 5 and closes together with the switch Ch1', the synchronized switches of the second circuit Ch2 and Ch2' are opened, blocking the passage of current through the secondary circuit. After half a cycle of rotor 6, the switch Ch2 closes together with the switch Ch2', and the switches Ch1 and ChT are opened, in such a way that this cycle repeats itself indefinitely.

This synchronicity of closing and opening of the pair of switches Ch1 4 and ChV and the pair of switches Ch2 and Ch2' guarantees that at each half a cycle of rotor 6 turn, the direction of the magnetic flow lines of the coil of the stator 1 alternates 180 degrees due to the positive/negative polarity change of terminals T1 and T2 of the coil 2 and contributes to the turn of rotor 6.

When the terminal T1 of coil 2 is positive and T2 is negative, the pulse is called "direct pulse", since the primary circuit is closed and the secondary circuit is opened. After half a cycle of rotor 6, the switches commute and terminal T1 becomes negative and T2 positive. In this latter case, the pulse is called "inverse pulse", since the primary circuit is opened and the secondary circuit is closed allowing the motor's feedback.

In a more advantageous way, the rotor used in the motor object of the present invention comprises a sole compact piece manufactured from a neodymium magnet with a magnetization degree varying between N24 to N54. However, it becomes clear that the above-mentioned rotor can also be manufactured from other materials such as for example ceramic ferrite, or those that use rare earth elements as raw material such as neodymium, samarium- cobalt, praseodymium,

cerium, etc. Also, preferably but not as a limitation to the present invention, the above-mentioned rotor comprises a sole and compact disc shape with a hole in the center, that is magnetized radially such as illustrated in Figure 6.

However, it should be clear that this discoid aspect of the rotor is only preferable and do not discard other geometries and magnet configurations such as compacted cylindrical magnets with a hole in the middle and magnetized axially, stacked cylinder magnets, conic, ovoid and even spherical, the last ones being the most efficient ones, but, presently reveal complexity and high manufacture costs. Additionally, as illustrated in Figures 7A and 7B, in order to increase the motor efficiency and capacity of the present invention, the coil that involves the radially magnetized neodymium discoid comprises an asymmetric format with a topology similar to a cone trunks, constituted by enameled or covered copper or aluminum wire, of any gauge, projected to work with tensions that vary from 9 to 12 volts, passing by the domestic voltages of 127 and 220 volts or superior up to industrial voltages.

Similarly, it is worth to highlight the fact that the coil topology is also only preferable and does not discard the possibility of using coils with a symmetric cylindrical or annular topology, that are normally used in many applications known in the art.

More specifically, Figures 8A, 8B, 8C, 8D and 8E depict alternative embodiments for the electromagnetic motor of the present invention, all of them with the purpose of achieving better efficiency and consequently work capacity. In these assemblies it is possible to noticed that the disposition of the coils is altered to increase the number of pulses that generate voltage peaks and electric current along one cycle of the rotor.

Figure 8A illustrates an assembly in which coil 2 is comprised of four sectors positioned 90 degrees out of phase, so that two pulses are generated along the rotation cycle of rotor 6. This is called biphasic assembly.

Figure 8B shows an assembly in which the coil comprises six sectors out of phase with each other, so that the feeding pulses of electric current are applied in three specific points of the rotation cycle of the rotor. In this case the electromagnetic motor is called tri-phase assembly.

Figure 8C shows a construction in which the coil 2 is divided into eight out-of-phase sectors, which requires four pulsation points along the rotation cycle of the rotor, being called tetra-phase assembly.
These arrangements are more compact, and their configurations take advantage of more pulses (direct and inverse pulse - in both coil directions) along the same cycle of the rotor, which speeds up the rotor and stabilizes torque when heavier loads are applied to the shaft.

The Figures 8D and 8E illustrate a coil configuration that is especially advantageous, in which the coil in the primary circuit holds an asymmetric format similar to the cone trunk. In the secondary circuit, the coil holds a similar format, even though it overlaps the spirals with a discrepancy of 90 degrees in relation to the first one forming a kind of beehive.

As a practical example of the advantages and technical effects given by the electromagnetic

motor according to the present invention when compared to the conventional motors known in the state of the art, it is possible to use any electrical receptor like a domestic fan, for example.

A typical and regular medium size domestic fan found in the market today is manufactured to consume around 120W of energy (P). The voltage (U) of the public power grid used for such devices is usually 127V (or 220V). Let's consider it 120V for easy calculation. Therefore, according to basic electrical theories, the electric current (i) flowing through the motor of this fan is 1A (let's consider this conventional motor's power factor = 1), because:

= p / U = 120W / 120V = 1A In other words, this electric appliance requires 1 Ampere of electric current to produce the power of 120W, which rotates the fan at a determined speed.

When this motor of the prior art was actually replaced by one equivalent electromagnetic motor of the present invention, it was possible to obtain the same mechanical work (i.e., the fan blade rotating at the same speed) with two 12V batteries in series (24V total voltage) and only 0.5 Amp flowing through the motor of the fan. Therefore, the power required by the motor of the fan to produce the same mechanical work is: P = U x I = 24 x 0.5 = 12W

The comparison between the two fans, one with the conventional motor of the state of the art and the other with the electromagnetic motor of the present invention, revealed that this latter is about ten times more efficient (consumed 10 times less energy) than the motor of the current prior art, due to the fact that the electromagnetic motor of the present invention is able to harness the back energy captured by the voltage peaks together with the collapse of the magnetic field trapped inside the coil, when the electric power supply is turned on and off at precise positions, as mentioned hereinbefore.

Alternatively, the rotation shaft of the present electromagnetic motor can be attached to a mechanism that, through the mechanical torque generated by the motor, works as a power generator. In addition, the present adaptation can be attached to, or even replace generators ran on primary sources of energy.

Although the present invention is described in relation to the motors used in devices called electric receptors, it is still possible to wind a second coil around the first coil, so that the second coil captures the back energy or back voltage by induction. Through the adaptation of a filament equivalent to a diode, in such a way to be opposed to the back energy flow, it is possible to generate a resistance, which will be heat the said filament, such as happened in the water heater.

Therefore, the electromagnetic motor, object of the present invention would be work as an heater device, which obtain heat through Joule effect, without consuming the energy from the primary source, since the consumed energy for heat is provided by the back voltage peaks.

Thus, in regard to all of what has been exposed hereinbefore, it is clear that the electromagnetic motor, object of the present invention, can obtain a substantial energy gain, due to voltage peaks and magnetic field collapses, as well as considerable reduction of losses, considered intrinsic to the motors of the current prior art. Besides, in its alternative construction a circuit with feedback

properties promoting a yet superior reduction of energy consumption and increase in the motor performance is obtained.

Mehran T. KESHE

Magnetic G-Fields

SEPMAFs (Specific Entangled Plasmatic Magnetic Fields) for over-unity energy production, transmutations, industrial processes, anti-G, &c... Metal-organic frameworks (Kt Fluid) captures atmospheric CO2 & methane at room temperature ... & much more ... Shades of Schappeller ...

From the Keshe website --

http://www.keshefoundation.com

info@keshefoundation.com

THE SOLUTION FOR CLIMATE CHANGE!

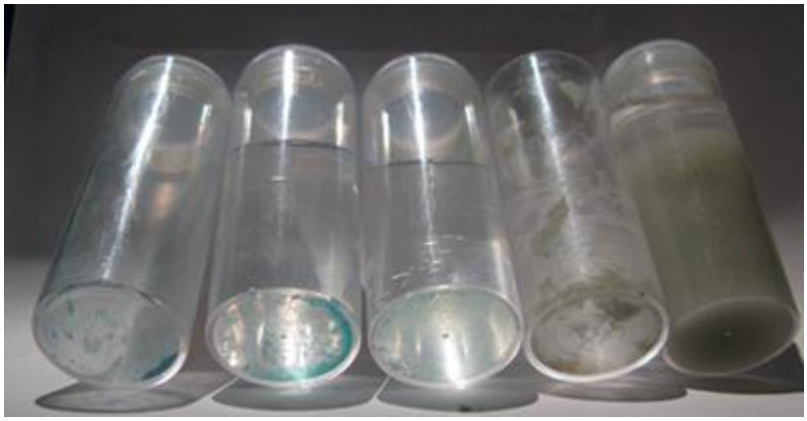
The Keshe Foundation is proud to announce the development of "**Day & Night Panels**" which deliver day and night current at levels which are considerably higher than the actual generation of solar panels. This means that D&N-panels will be able to power constantly electrical and electronic devices. This new technology is under patent application.

At the same time these panels have the possibility to capture CO2 and CH4 in liquid state from the air. CO2 and CH4 are important greenhouse gasses.

The image on the left shows two containers with a white/grey CO_2 deposition, that is the liquid, jelly-like, CO_2. On top is water.

The third tube contains a solution of CH_4, with at the bottom a green-blueish CH_4 deposition.

All these materials were tested by several type of spectroscopy at a University in Belgium



This image shows five tubes (from left to the right): a tube with CH_4 powder, CH_4 deposit in solution, CH_4 solution, tube with solid CO_2, tube with liquid CO_2

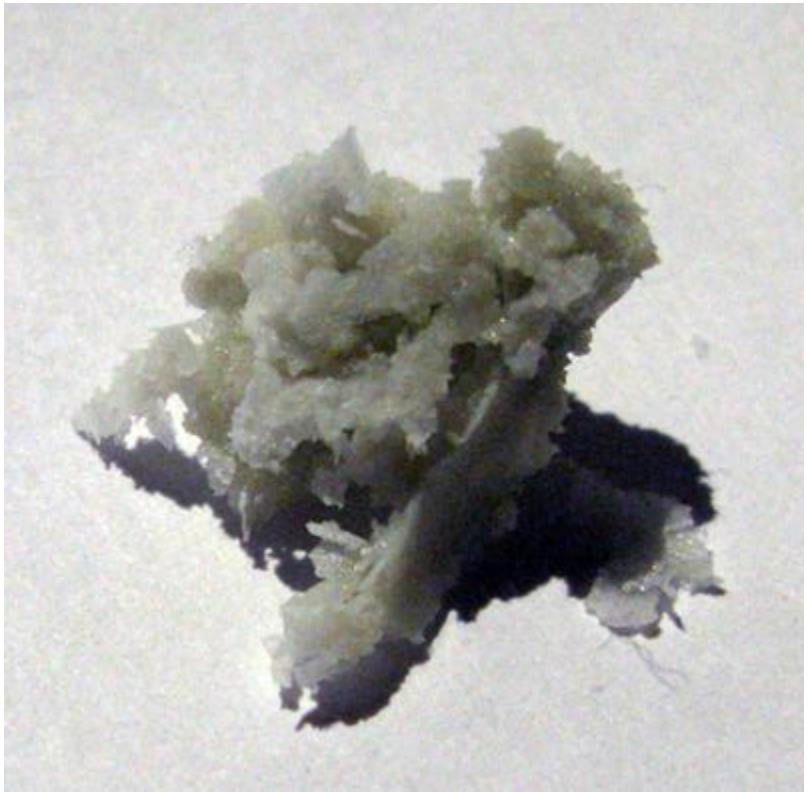


Photo of solid CO2 at room temperature. This mastic-like substance is not "dry ice", which is the state we normally would consider solid CO2 to be. Therefore we consider it to be in GANS-state (GAs + Nano + Solid state).

The solid CO2 can be bent or manipulated like a chewing gum or a mastic. It has the temperature of the room.

Our CO2 jell is measured at 2630 wavelength of the spectrum, where the asymetric stretch is normally predicted at 2640 cm-1 (after ref. science.widener.edu), so an almost perfect match.

More information and more spectroscopic graphs are given in a new paper of Ir. M.T. Keshe, titled: Production of energy through absorption of CO2 and CH4 from the environment and their conversion into a solution or solid and production of Oxygen by the use of compound and nano materials at room temperatures and pressures. (Dec. 2009).

"Direct Absorption of Carbon Dioxide and Methane Gases from the Environment and Their Conversion into Nano Solution and Nano Solid Matters and Production of Energy and Oxygen by the Use of Nano Compound at Ambient Temperature and Pressure"

by

M.T. KESHE

[PDF]

"Kt Liquid" Proprietary Catalyst --

Cola Plasma Reactor Generates Energy

Several static and dynamic working prototypes confirms the new insights related to the PME's (Plasmatic Magnetic Energy) and the Keshe concept of **SEPMAF's (Specific Entangled Plasmatic Magnetic Fields)**. In the design and technology of our reactor systems, the same principles and methods as in the universal physics are developed and similar effects have been achieved.

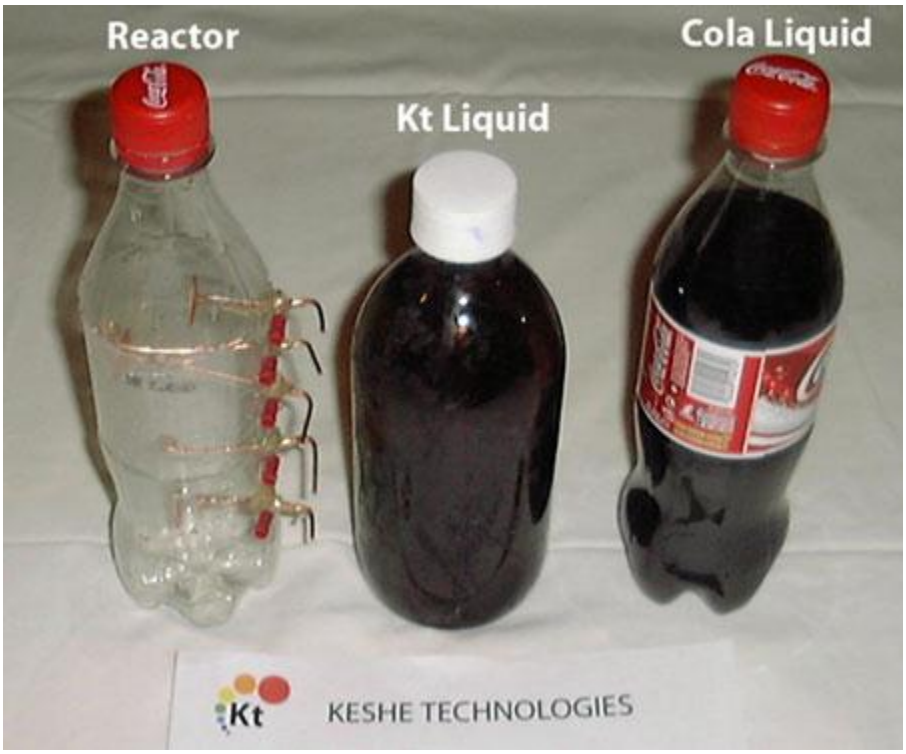
One of most simple static plasma reactors is the Cola Bottle. This is equipped with a number electrodes, from two to five.

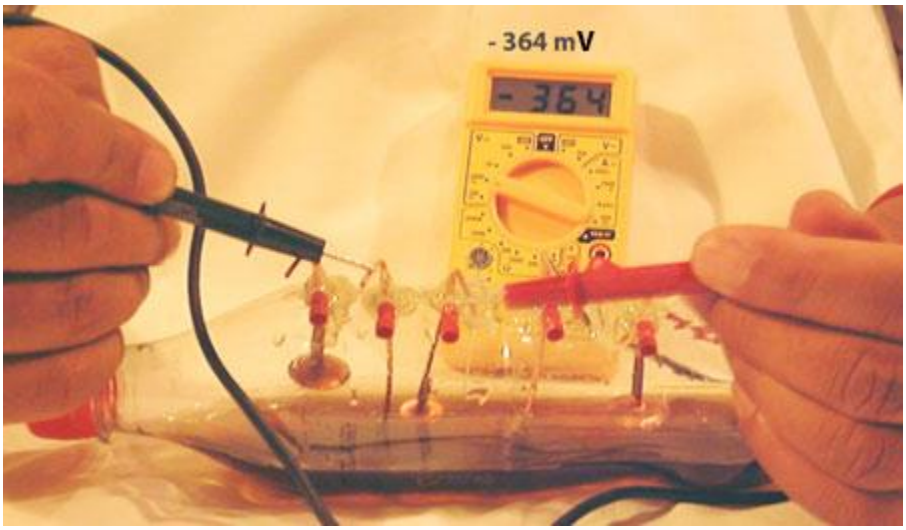
In this cola bottle reactor we achieve several outputs of voltage and current, we create atomic hydrogen and we process simultaneously deposits of atomic carbon on electrodes. The processing in not based on chemical interaction, like with acids. The working of these static reactors is completely different from as it happens in existing batteries. Current is for example also collected from electrodes which are not submerged in the liquid, thus is collected from pure plasma. Next it is noted that the reactor recharges itself automatically while other terminals generate voltage.

The main goal to perform these tests is proving that the carbon from the gasses inside the liquid can be collected and deposited on the electrodes. This is to demonstrate that the same principle

can be utilized for separation of carbon from the exhaust gasses of cars and industry.

The acids contained in the cola drink are not essential to create current.





Other outcomes have been found with other combinations of the electrodes. Similar voltages and current are also reached with both electrodes only in the plasma area (upper part), thus not submerged in the liquid.

All photos were taken during the same test. After further processing the electrodes become black by the deposits of sp2's and sp3. Sp2 carbon (called 'graphene') is a ballistic (super-super)

conductive material that can be used in micro- and nano-electronics. Sp3's are diamond-like structures. This all happens in a simple cola bottle, and not in complex systems with lasers and high pressure or vacuum!

Transparent testing: During demonstrations for potential partners they can provide themselves proper electrodes (and the cola liquid). They can use their own multi-meter to measure the outcome. They are allowed to videotape the demonstration. After demonstration the electrodes with carbon deposits will be given back for proper or independent testing. We are even prepared to agree on more stringent testing set-up, like the making of the reactor (proper glue, and gluing the electrodes in an empty reactor bottle provided by the potential partner himself) in their presence.

The proof of concept shown by the processes in these static reactors when applied in dynamic reactors deliver a much higher electrical outcome, able to deliver electricity for various applications, such as for households, villages, cars, electronics, machines, industry, lighting and industrial processing.

ENERGY TECHNOLOGY

This web page gives a new insight into the energy production capabilities of the systems.

The technology behind the development of this reactor goes back to basic understanding of the laws of physics.

The concept of creation of energy for this reactor is on the basis of the understanding of the cooperation, interaction and application of the atomic structure of the gases and matters up on each other.

The principal of the behavior of gases and liquids in the environment has been studied and catalogued in detail over the past decades. This is an important factor in development of any energy system, which has to be portable and light, but at the same time flexible, energetic and functional for it to be used for its merit in any system. This being used for power production, gravity or anti-gravity, shielding and medical use and so forth.

For this system to be able to take advantage of above criteria it is important to use Hydrogen as the primary catalyst.

The use of the system as an Energy source

This system is a fully integrated Electro-Nuclear-Magnetic power generator.

The system, at its core, will be a creator of magnetic field forces that man is used to as part of the magnetic fields of the earth. The unit generates magnetic fields that can pass through tissues and atoms without affecting their characteristics.

Magnetic fields created by planets are called the Passive Magnetic Field Forces (PMF). These properties are what the whole universe uses to move moons, planets, stars and the galaxies.

In utilizing these forces and technology available through this system, electric energy can be created using hydrogen as its fuel.

The creation of electric energy in this reactor is achieved through the simple process of hydrogen ionization. Elaborate systems have been developed to tap into this process during its interactions with other matters in the core of the reactor.

The hydrogen supplied for this purpose is of a natural form, which can be realized from water or the atmosphere through already established, known technologies.

The Keshe Electric Generator

The most important actual systems for the production of electricity heat up water to create steam, where the steam then will provoke the rotation of a turbine which is connected to a magnet. This magnet rotates in coil structures.

These systems produce a lot of negative waste effects.

We can simplify the generation of electricity by the new Keshe generators which will contain only low, short term, nuclear sources. These generators will produce electricity over a long time, since the basic interactions are self-sustaining.

This is one of the concepts of a Keshe generator. A spherical self-rotating reactor core spins inside a set(s) of coils. On the reactor-body additional magnets can be mounted.

These electric generators can be installed on the locations where current is needed.

HYDROGEN

Hydrogen gas at an atomic and molecular level has some fascinating properties. That, if they are used for the right purpose at the right time in the right combination, this element will provide and facilitate most of the needs of systems for all above applications.

So, it does not matter in what form Hydrogen is used, when this gas is used in conjunction with other elements. Primary conditions can be created in the reactor that brings about all above desired effects in any system.

Hydrogen atoms by having one proton and one electron are the lightest element in the universe; it is one of the most common elements used for creation of plasma.

To create plasma there is a need to separate the electron from its nucleus by means of injecting enough energy into the atom so that the nucleus can be freed of its electron. This process is known as the ionization of hydrogen atoms.

Scientists have successfully achieved this principal for some time. If the excited electron, which is created, can be made to lose its energy in an appropriate way, it can return to its original state. Then the production of current and heat is made simple.

How these effects are created and used, are the principals behind the energy and gravity creation of this reactor. In this reactor, electrons are released from their nuclei with a method that has been known for some time by scientists, where the reaction is achieved by a very simple method of magnetic environment injection using natural hydrogen atoms. This is a very simple but effective method especially developed for the application in this reactor.

Then as other elements come in to play, the true nature of hydrogen will reveal its potency in this system as a whole as it has done in the universe.

Where, how, how much, when and the way these gases and matters are applied in the system, will create the desired effect that is required of the system at that time.

So the system can be a power generator, then with a slight change in one of the parameters of one of the matters the system will become a gravity machine. Then, by combining the two effects, one will have a system that not only generates energy, but it holds gravity and creates anti-gravity too.

With this system one cannot bring in to play the conventional present day fuels, and methods to create energy and magnetism.

In this system energy production is achieved simply by the normal creation of heat first, then gravity in the center of the core, with the help of the generation of magnetic fields through the right method of circulation and cooling system, within the reactor.

In the world of science, it has always been considered that the core of a planet possesses magnetic fields that cause it to rotate.

For the first time and through new understanding of the system of creation of gravitational forces in planets, it has been proven theoretically by Mr. M. T. Keshe that the center of the Earth possesses two magnetic fields rather then one.

In understanding the “double magnetic field” operation of the earths core, with the design of this new reactor, the gravitational system of the earth is replicated, leading to the creation and control of gravity in the center of the reactor.

In understanding the operation of this double magnetic field force, and incorporating it in the reactor that is being developed, new horizons are opened in the world of science.

For example, this leads to the creation of heat sufficient to generate a super heated head of steam at the outer boundaries of the system adequate to run the present PowerStation turbines if need be.

Where production of the electric current directly from the reactor core is achievable.

The system is fueled by hydrogen, so that there are no possibilities of radiation leakage or radioactive waste problems due to other effects in this system.

In present nuclear reactors, heat is collected using all sorts of moderators, cooling and blanketing in a concentrated way inside and outside the reactor's core. Then, the collected heat is fed through, to run a (steam) turbine creating energy.

Through the specific design of this reactor all the heat distribution, removal and circulation is done inside the reactor, without the need to remove heat from the boundary of the reactor in a concentrated method as has been done in the past.

This has been possible through the understanding of the natural method of heat dissipation as done in planets.

The concept behind this technology comes from the simple fact that in the Universe planets do not have cooling towers or exhaust pipes.

Efforts were made to look at the real method of energy creation in the planets in possession of internal heating systems, but cool enough that man can walk on their surface, like earth. Through a simple but effective way, this has been achieved in the core of this reactor, where heat is dissipated so that it will never reach the outer boundary of the reactor.

The advantage with this system is, that when heat is redistributed in a slightly simpler way, and not in a concentrated method as done in the present thermal nuclear reactors, totally different properties from the reactor with the same fuel can be attained.

These properties created in this system, are what the whole Universe uses to heat and move planets, stars and galaxies.

This system uses technology which can and will lead to fusion, semi-fusion and fission if required.

All this is achieved by using a reactor, which has in its core no valves or screws, and as in the center of planets, requires a very small amount of hydrogen.

*** electricity-production400
*** simplelectricity

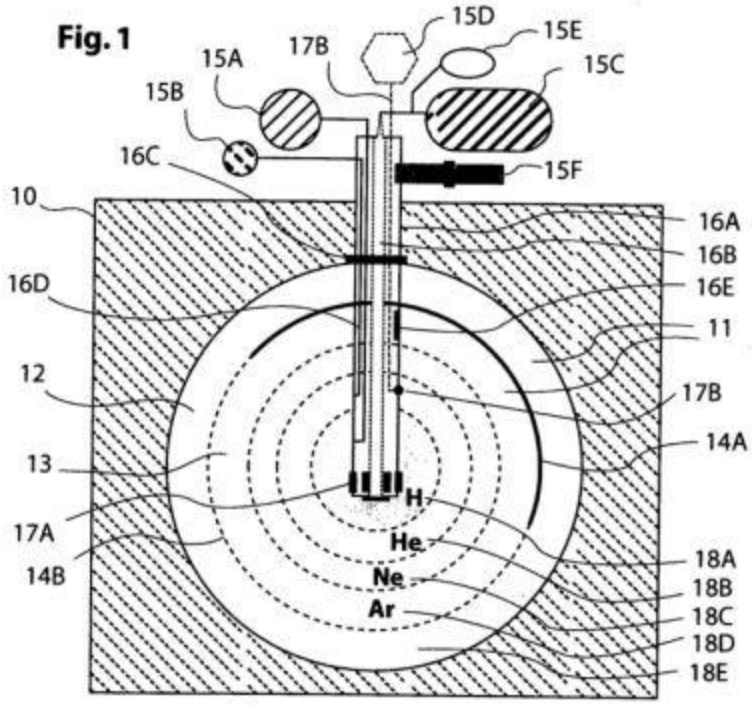
WO2008113393
EP1770715
MICRO PLASMA REACTOR

[PDF]

Inventor: TAVAKOLI KESHE MEHRAN

Abstract -- A plasma reactor for the creation of energy is disclosed, which comprises of several technical means (wall, seal, ort/gate, outcome), and which contains materials from which at least one sub-quantity being radioactive and/or being able to be transformed in a radioactive isotope during the internal process, other materials from which at least one sub-quantity being an inert gas and/or being able to be transformed in an inert gas or in inert gas vapour during the internal process, other materials from which at least one sub-quantity being a atomic or molecular metallic material and/or being able to be transformed in a atomic or molecular metallic material, in metallic gas or in metallic vapour during the internal process, and other materials from which at least one sub-quantity is hydrogen and/or being able to be transformed in a atomic or molecular hydrogen, during the internal process, and where upon the sealing of said chamber said materials, a controllable interaction process - called the initial dynamic process - of repositioning the plasmatic magnetic energy fields of the introduced elements starts, where a number of the dynamic actions between them lead to the creation of new plasmatic magnetic energy fields, like in atomic, plasmatic and molecular level, and where the interaction between at least two of them simultaneously lead to the fragmentation of existing plasmatic energy fields. This leads to creation of current and energy from the reactor, and where from these fragmentations can be collected useful energy output. These self-sustaining reactors can be build in in many objects and machines.

Fig. 1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17B
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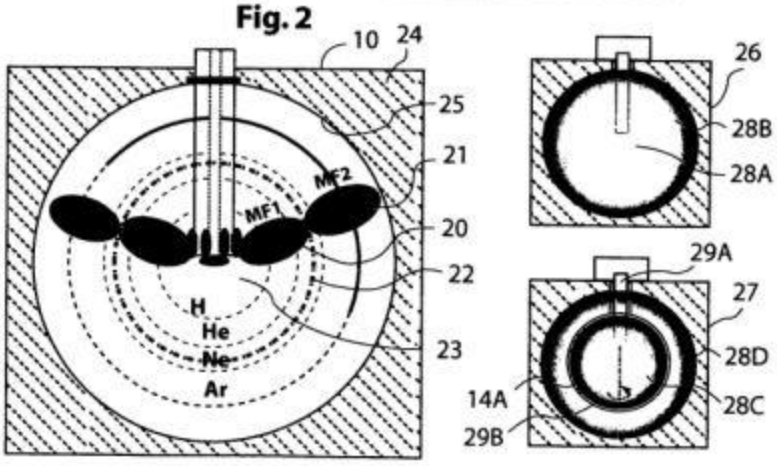
Fig. 2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MF2
MF1
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29A
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28D
14A
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Fig. 3

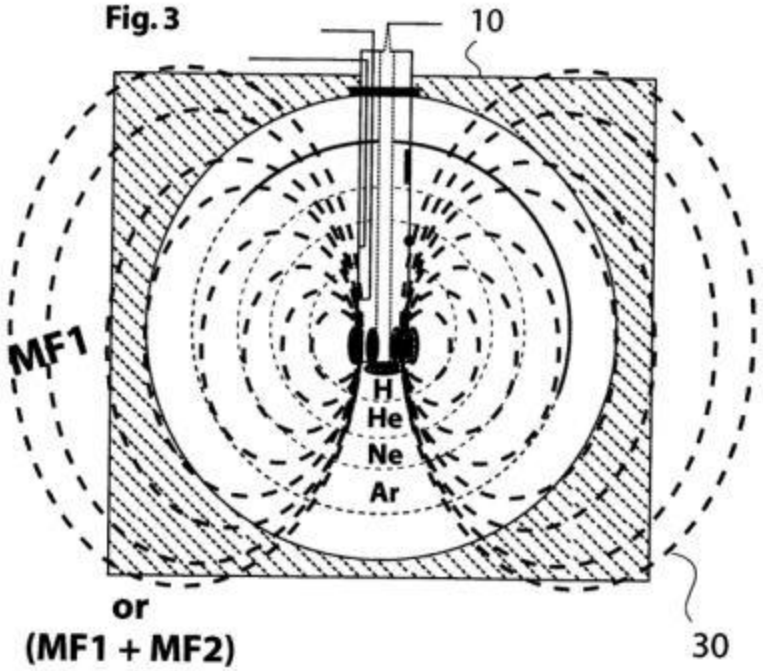


Fig. 4

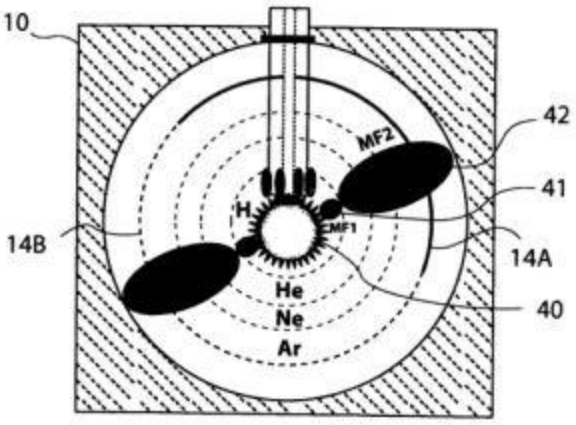


Fig. 5

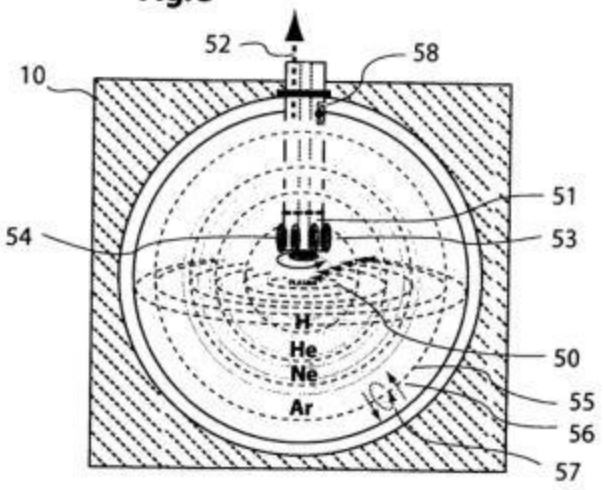


Fig. 6

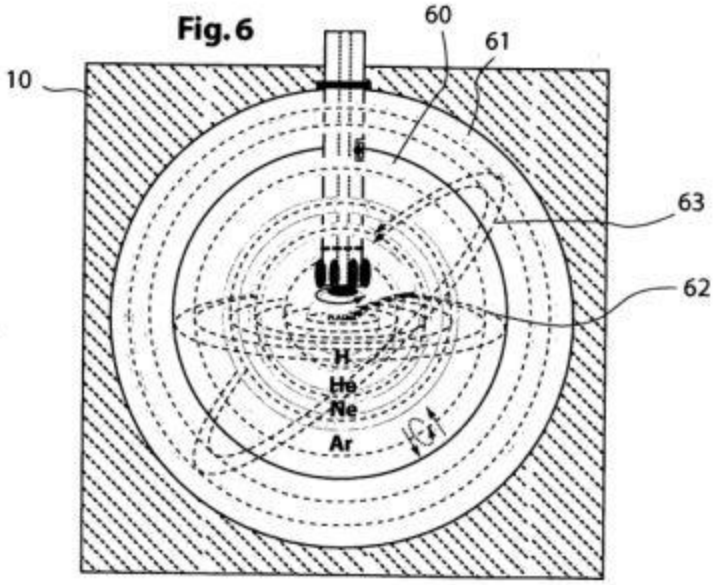


Fig. 7

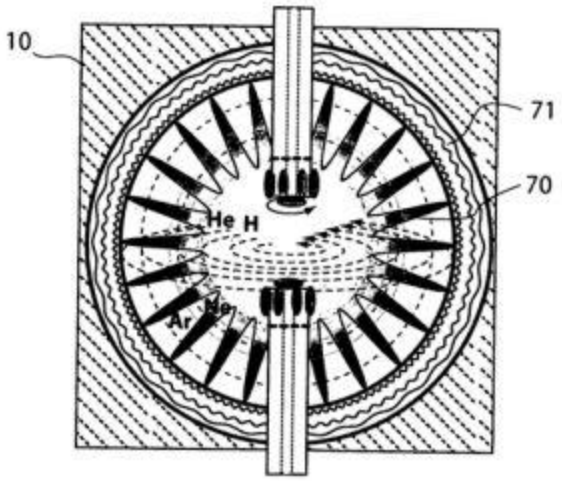
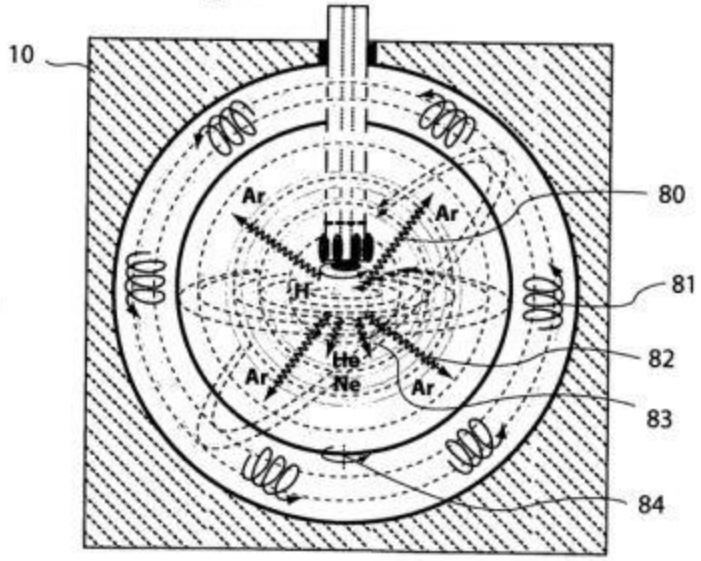
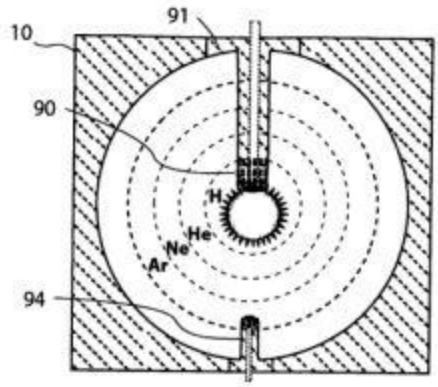


Fig. 8

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90
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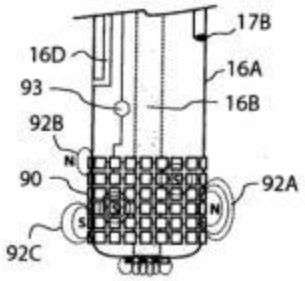
94

Fig. 9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93
16B
92B
N
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92A
S
N
92C

Fig. 10

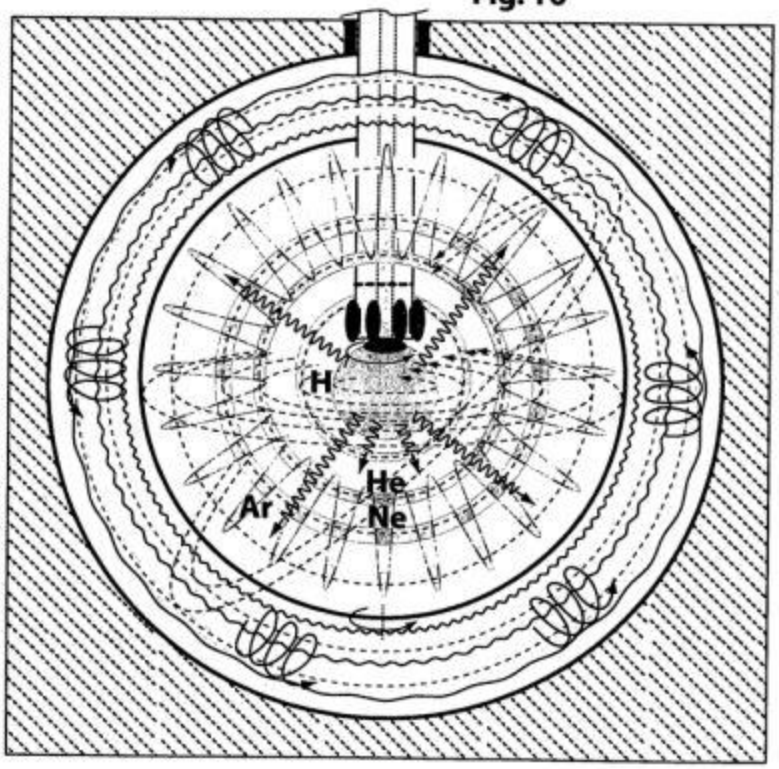
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Fig. 11

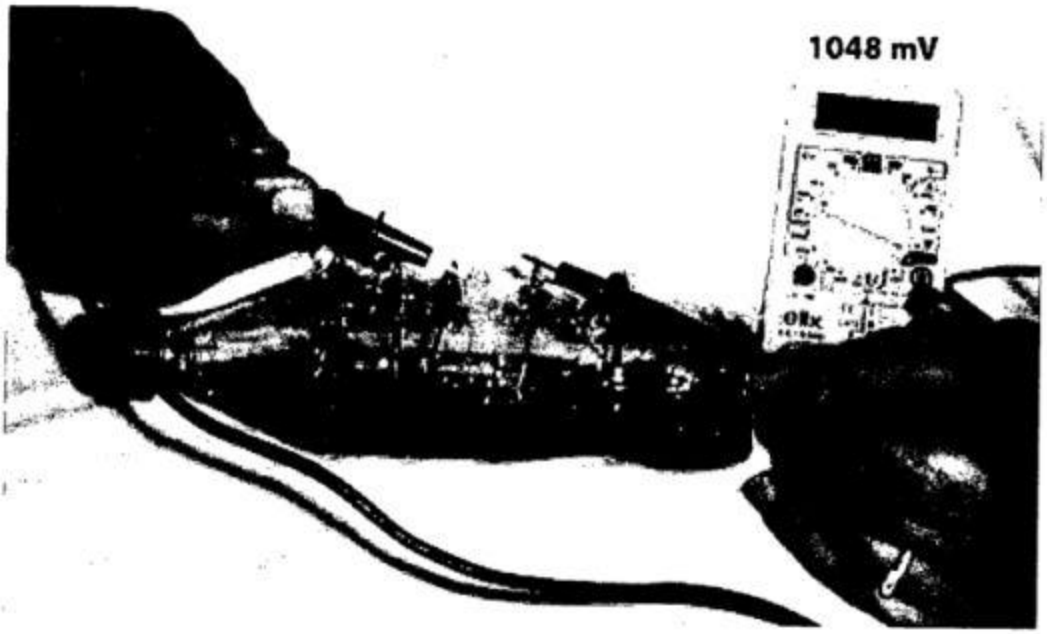


Fig. 12

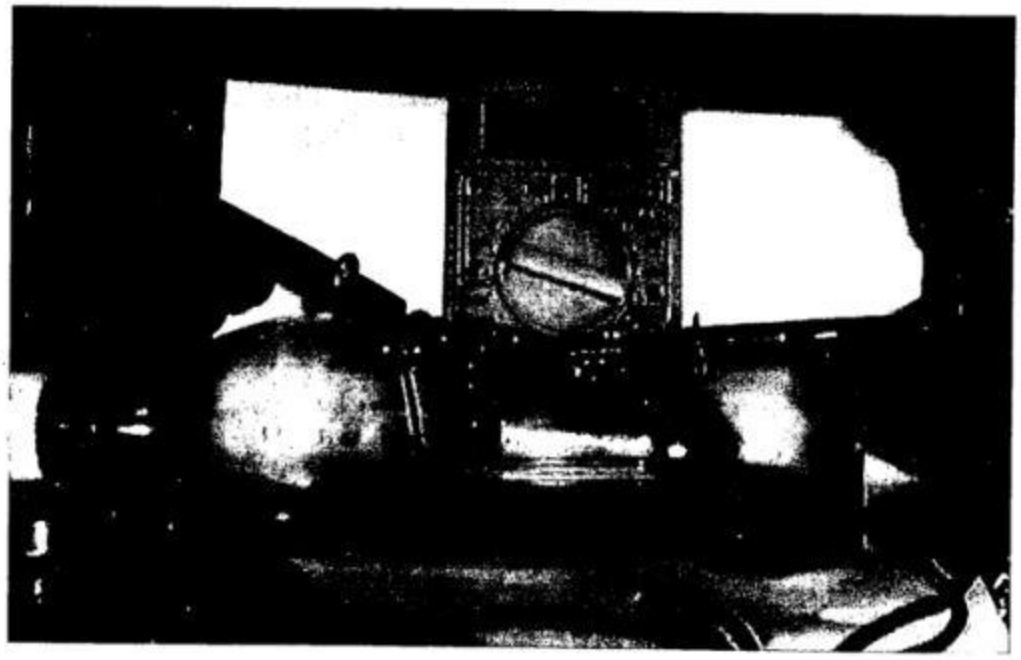
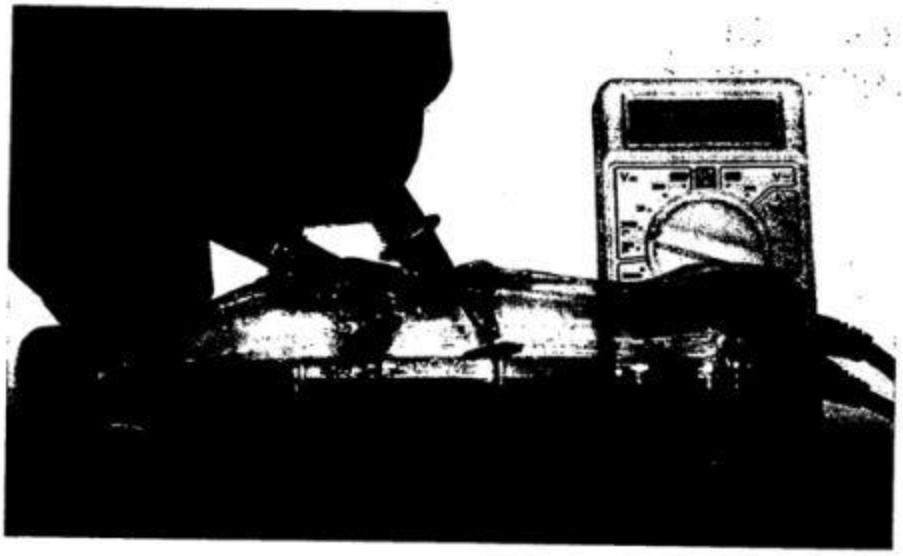


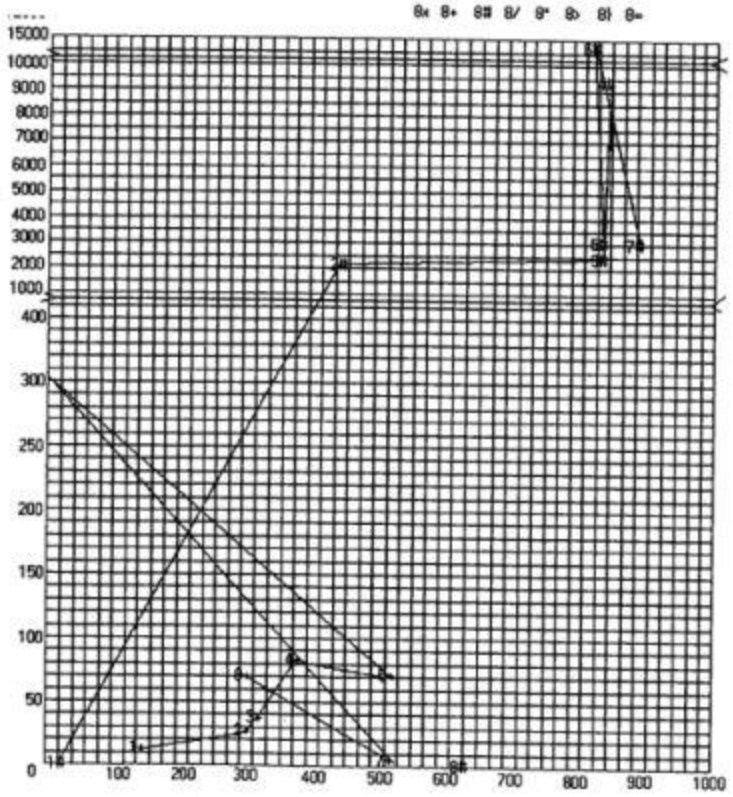
Fig. 13



Values of current and voltage in respect to Terminal
V in mV and A in Micro amps 1 and 1A
and 2 and3

1	1A	2	2A	3	3A	4	4A
1X	1+	1#	1/	1*	1>	1)	1=
2x	2+	2#	2/	2*	2>	2)	2=
3x	3+	3#	3/	3*	3>	3)	3=
4x	4+	4#	4/	4*	4>	4)	4=
5x	5+	5#	5/	5*	5>	5)	5=
6x	6+	6#	6/	6*	6>	6)	6=
7x	7+	7#	7/	7*	7>	7)	7=
8x	8+	8#	8/	8*	8>	8)	8=

Fig. 14



WO2008113392
EP1770717

GRAVITATIONAL AND ENERGY SYSTEM

[PDF]

Inventor: TAVAKOLI KESHE MEHRAN

Abstract -- A new method, process and technology is described how introduced materials can self-generate plasmatic conditions, plasma and plasmatic magnetic energy fields in presence of ionization conditions and at room temperature and normal atmospheric conditions. This initial plasma condition - including the generation of voltage and current - can be enhanced by adding motion means. Then more turbulence, rotation, compressive and heating of a gaseous matter is created in a reactor by at least one central rotative magnetic field with the purpose of creating plasmatic conditions leading to the creation various magnetic fields where at least the interaction of two magnetic field would lead to the creation of at least one gravitational force phenomena. In a reactor-embodiment a chain of energetic events is created via a rotative magnetic initiation of a basic ionization of a gas (i.e. hydrogen) which then triggers a controllable chain of energy transfers (Scintillation) to the next following layer(s) of introduced gasses (i.e. He, Ne, Ar, Kr, Xe), of ail other introduced elements of the periodic table (i.e. Li, Be, K, Ca, Ti,... Pt, etc.) and/or their introduced molecule combinations (i.e. a vapor). A central colums has magnetic means to start the process. Various concepts, applications and products are disclosed, such as space travel and atomic welding.

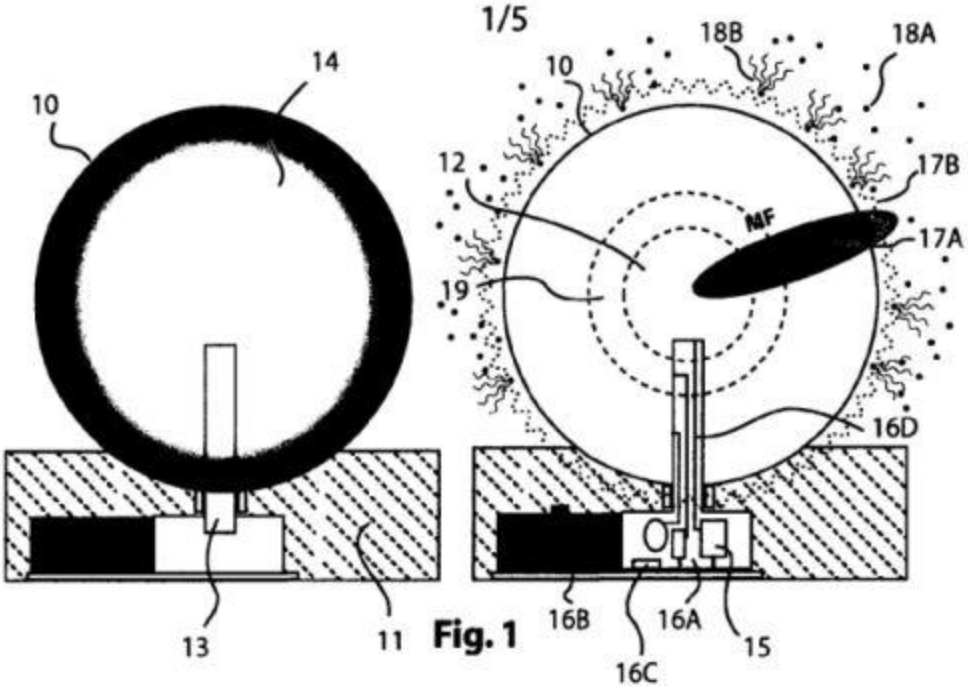

14
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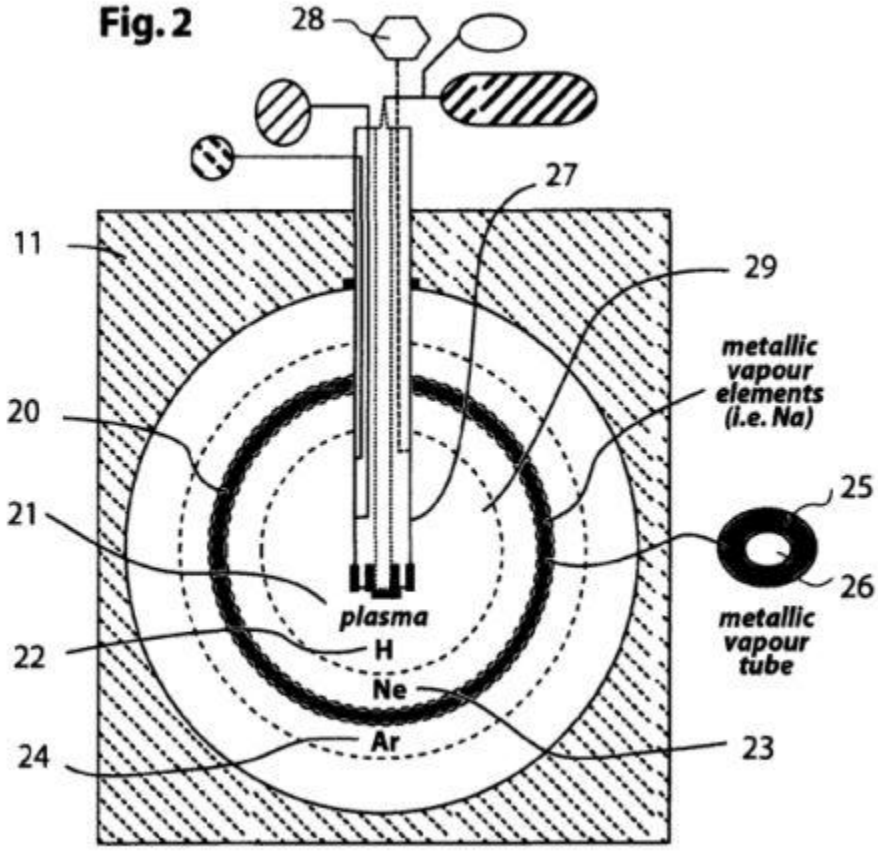
Fig. 1

Fig. 2


28
27
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metallic vapour elements (i.e. Na)
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plasma
metallic vapour tube
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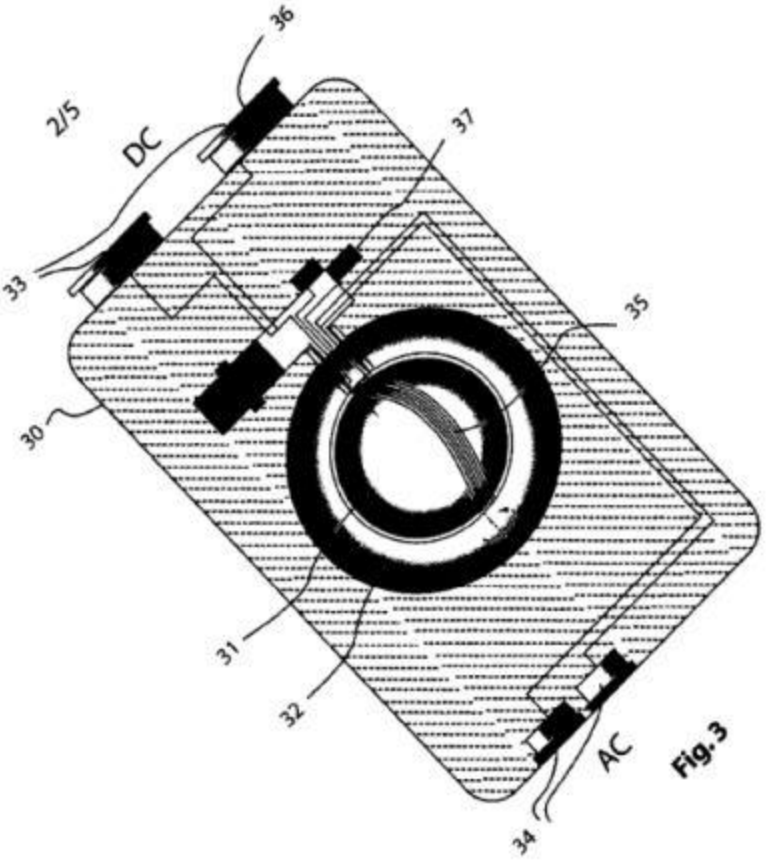

Fig.3

Fig. 4

Fig. 5

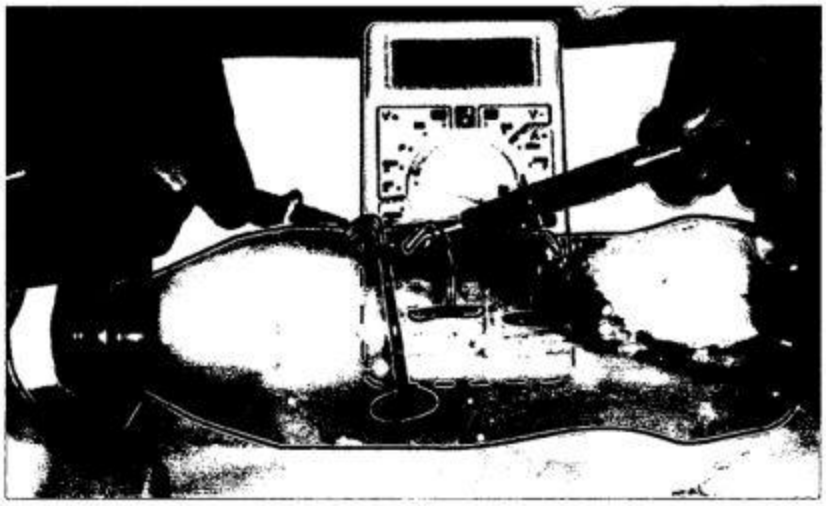

Fig. 6

Fig. 7

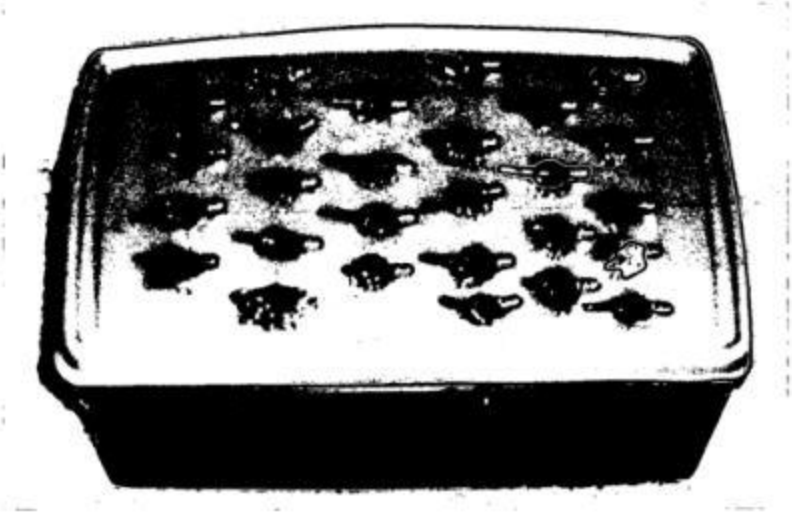

Fig. 8

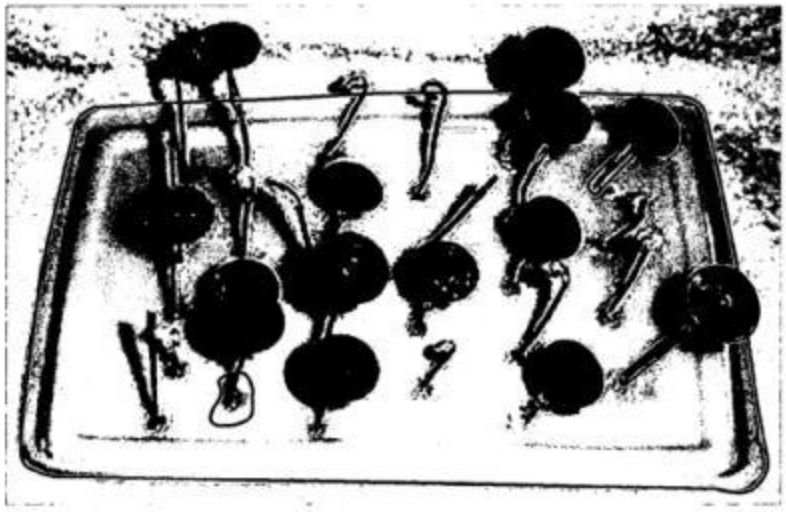

Fig. 9

Robert KINCHELOE

N-Machine Test

HOMOPOLAR "FREE-ENERGY" GENERATOR TEST

by **Robert Kincheloe**
Professor of Electrical Engineering (Emeritus), Stanford University

Paper presented at the 1986 meeting of the Society for Scientific Exploration (San Francisco, June 21, 1986)
Revised February 1, 1987

Abstract

Known for over 150 years, the Faraday homopolar generator has been claimed to provide a basis for so-called "free-energy" generation, in that under certain conditions the extraction of electrical output energy is not reflected as a corresponding mechanical load to the driving source.

During 1985, I was invited to test such a machine. While it did not perform as claimed, repeatable data showed anomalous results that did not seem to conform to traditional theory.

In particular, under certain assumptions about internally generated output voltage, the increase in input power when power was extracted from the generator over that measured due to frictional losses with the generator unexcited seemed to be either about 13% or 20% of the maximum computed generated power, depending on interpretation.

The paper briefly reviews the homopolar generator, describes the tests on this particular machine, summarizes and presents tentative conclusions from the resulting data.

The Sunburst Homopolar Generator

In July, 1985, I became aware of and was invited to examine and test a so-called free-energy generator known as the Sunburst N Machine.

This device, shown in **Figures 1a & 1b**, was proposed by Bruce DePalma and constructed by Charya Bernard of the Sunburst Community in Santa Barbara, CA, about 1979.

The term "free-energy" refers to the claim by DePalma [1] (and others [2]) that it was capable of producing electrical output power that was not reflected as a mechanical load to the driving mechanism but derived from presumed latent spatial energy.

Apart from mechanical frictional and electrical losses inherent in the particular construction, the technique employed was claimed to provide a basis for constructing a generator which could supply the energy to provide not only its own motive power but also additional energy for external use. From August 1985 to April 1986 I made a series of measurements on this particular machine to test these claims.

Generator Description

Details of the generator construction are shown in **Figure 2** and **Figure 3**.

It consists essentially of an electromagnet formed by a coil of 3605 turns of #10 copper wire around a soft iron core which can be rotated with the magnetic field parallel to and symmetrical around the axis of rotation.

At each end of the magnet are conducting bronze cylindrical plates, on one of which are arranged (as shown in **Figure 3**) one set of graphite brushes for extracting output current between the shaft and the outer circumference and a second set of metering brushes for independently measuring the induced voltage between these locations.

A third pair of brushes and slip rings supply the current for the electromagnet. A thick sheath of epoxy-impregnated fiberglass windings allow the magnet to be rotated at high speed.

The generator may be recognized as a so-called homopolar, or acyclic machine, a device first investigated and described by Michael Faraday [3] in 1831 (**Figure 4** & **Figure 5**) and shown schematically in **Figure 6**.

It consists of a cylindrical conducting disk immersed in an axial magnetic field, and can be operated as a generator with sliding brushes extracting current from the voltage induced between the inner and outer regions of the disk when the rotational energy is supplied by an external driving source.

The magnitude of the incremental radial generated voltage is proportional to both the strength of the magnetic field and the tangential velocity, so that in a uniform magnetic field the total voltage is proportional to the product of speed times the difference between the squares of the inner and outer brush radii.

The device may also be used as a motor when an external voltage produces an radial current between the sliding brushes.

There have been a number of commercial applications of homopolar motors and generators, particularly early in this century [4], and their operating principles are described in a number of texts [5].

The usual technique is to use a stationary magnet to produce the magnetic field in which the conducting disk (or cylinder) is rotated.

Faraday found, however, (**Figure 7**) that it does not matter whether the magnet itself is stationary or rotating with the disk as long as the conductor is moving in the field, but that rotating the magnet with the conducting disk stationary did not produce an induced voltage.

He concluded that a magnetic field is a property of space itself, not attached to the magnet which serves to induce the field [6].

DePalma stated [7] that when the conducting disk is attached to a rotating magnet, the interaction of the primary magnetic field with that produced by the radial output current results in torque between the disk and the magnet structure which is not reflected back to the mechanical driving source.

Lenz's law therefore does not apply, and the extraction of output energy does not require additional driving power. This is the claimed basis for extracting "free" energy.

Discussions of the torque experienced by a rotating magnet are also discussed in the literature [8].

Because the simple form shown in **Figure 6** has essentially one conducting path, such a homopolar device is characterized by low voltage and high current requiring a large magnetic field for useful operation.

Various homopolar devices have been used for specialized applications [9] (such as generators for developing large currents for welding, ship degaussing, liquid metal magnetohydrodynamic pumps for nuclear reactor cooling, torque motors for propulsion, etc.), some involving quite high power.

These have been extensively discussed in the literature, dealing with such problems as developing the high magnetic fields required (sometimes using superconducting magnets in air to avoid iron saturation effects), the development of brushes that can handle the very high currents and have low voltage drop because of the low output voltage generated, and with counteracting armature reaction which otherwise would reduce the output voltage because of the magnetic field distortion resulting from the high currents.

From the standpoint of prior art, the design of the Sunburst generator is inefficient and not suitable for power generation:

1. The magnetic field is concentrated near the axis where the tangential velocity is low, reducing the generated voltage.

2. Approximately 4 kilowatts of power are required to energize the magnet, developing enough heat so that the device can only be operated for limited periods of time.

3. The graphite brushes used have a voltage drop almost equal to the total induced voltage, so that almost all of the generated power is consumed in heating the brushes.

4. The large contacting area (over 30 square inches) of the brushes needed for the high output current creates considerable friction loss.

Since this machine was not intended as a practical generator but as a means for testing the free energy principle, however, from this point of view efficiency in producing external power was not required or relevant.

DePalma's Results with the Sunburst Homopolar Generator

In 1980 DePalma conducted tests with the Sunburst generator, describing his measurement technique and results in an unpublished report [10].

The generator was driven by a 3 phase AC 40 horsepower motor by a belt coupling sufficiently long that magnetic fields of the motor and generator would not interact. A table from this report giving his data and results is shown in **Figure 8**.

For a rotational speed of 6000 rpm an output power of 7560 watts was claimed to require an increase of 268 watts of drive power over that required to supply losses due to friction, windage, etc., as measured with the output switch open.

If valid, this would mean that the output power was 28.2 times the incremental input power needed to produce it. Several assumptions were made in this analysis:

1. The drive motor input power was assumed to be the product of the line voltage and current times the appropriate factor for a three-phase machine and an assumed constant 70% power factor.

There was apparently no consideration of phase angle change as the motor load increased. This gives optimistic results, since consideration of phase angle is necessary for calculating power in an AC circuit, particularly with induction motors.

It might also be noted that the measured incremental line current increase of 0.5 ampere (3.3%) as obtained with the analog clamp-on AC ammeter that was used was of limited accuracy.

2. The output power of the generator was taken to be the product of the measured output current and the internally generated voltage in the disk less the voltage drop due only to internal disk resistance. Armature reaction was thus neglected or assumed not to be significant.

3. The generated voltage which produced the current in the main output brushes was assumed to be the same as that measured at the metering brushes, and the decrease in metered voltage from 1.5 to 1.05 volts when the output switch is closed was assumed to be due to the internal voltage drop resulting from the output current flowing through the internal disk resistance that is common to both sets of brushes and calculated to 62.5 microohms.

Of these, the first assumption seems the most serious, and it is my opinion that the results of this particular test were inaccurate.

Tim Wilhelm of Stelle, Illinois, who witnessed tests of the Sunburst generator in 1981, had a similar opinion [11].

Recent Tests of the Sunburst Generator

Being intrigued by DePalma's hypothesis, I accepted the offer by Mr. Norman Paulsen, founder of the Sunburst Community, to conduct tests on the generator which apparently had not been used since the tests by DePalma and Bernard in 1979.

Experimental Setup

A schematic diagram of the test arrangement is shown in **Figure 9**, with the physical equipment shown in **Figure 10a**. The generator is shown coupled by a long belt to the drive motor behind it, together with the power supplies and metering both contained within and external to the Sunburst power and metering cabinet.

Figure 10b shows the panel of the test cabinet which provided power for the generator magnet and motor field. The 4-1/2 digit meters on the panel were not functional and were not used; external meters were supplied.

I decided to use an available shunt-field DC drive motor to facilitate load tests at different speeds and to simplify accurate motor input power measurements.

Referring to **Figure 9**, variacs and full-wave bridge rectifiers provided variable d-c supplies for the motor armature and field and the homopolar generator magnet.

Voltages and currents were measured with Micronta model 11-191 3-1/2 digit meters calibrated to better than 0.1% against a Hewlett Packard 740B Voltage Standard that by itself was accurate to better than .005%.

Standard meter shunts together with the digital voltmeters were used to measure the various currents. With this arrangement the generator speed could be varied smoothly from 0 to over 7000 rpm, with accurate measurement of motor input power, metered generator output voltage Vg and generator output current Ig.

Speed was measured with a General Radio model 1531 Strobotac which had a calibration accuracy of better than 2% (as verified with a frequency counter) and which allowed determination of relative speed changes of a few rpm of less.

Small changes in either load or input power were clearly evident because of the sensitivity of the Strobotac speed measurement, allowing the motor input power to be adjusted with the armature voltage variac to obtain the desired constant speed with no acceleration or deceleration before taking readings from the various meters.

Generator Tests

Various tests were conducted with the output switch open to confirm that generated voltage at both the output brushes (Vbr) and metering brushes (Vg) were proportional to speed and magnetic field, with the polarity reversing when magnetic field or direction of rotation were reversed.

Tracking of Vbr and Vg with variation of magnetic field is shown in **Figure 11**, in which it is seen that the output voltages are not quite linearly related to magnet current, probably due to core saturation.

The more rapid departure of Vg from linearity may be due to the different brush locations as seen on **Figure 3**, differences in the magnetic field at the different brush locations, or other causes not evident. An expanded plot of this voltage difference is shown in **Figure 12**, and is seen to considerably exceed meter error tolerances.

Figure 11 also shows an approximate 300 watt increase in drive motor armature power as the magnet field was increased from 0 to 19 amperes.

(The scatter of input power measurements shown in the upper curve of **Figure 11** resulted from the great sensitivity of the motor armature current to small fluctuations in power line voltage, since the large rotary inertia of the 400 pound generator did not allow speed to rapidly follow line voltage changes).

At first it was thought that this power loss might be due to the fact that the outer output brushes were arranged in a rectangular array as shown in **Figure 3**.

Since they were connected in parallel but not equidistant from the axis the different generated voltages would presumably result in circulating currents and additional power dissipation.

Measurement of the generated voltage as a function of radial distance from the axis as shown in **Figure13**, however, showed that almost all of the voltage differential occurred between 5 and 12 cm, presumably because this was the region of greatest magnetic field due to the centralized iron core.

The voltage in the region of the outer brushes was almost constant, with a measured variation of only 3.7% between the extremes, so that this did not seem to explain the increase in input power. The other likely explanation seems to be that there are internal losses in the core and other parts of the metal structure due to eddy currents, since these are also moving conductors in the field.

In any event, the increase in drive power was only about 10% for the maximum magnet current of 19 amperes.

Figure 14 typifies a number of measurements of input power and generator performance as a function of speed and various generator conditions.

Since the generator output knife switch procedure was very stiff and difficult to operate the procedure used was to make a complete speed run from zero to the maximum speed and descending again to zero with the switch open, taking readings at each speed increment with the magnet power both off and on.

The procedure was then repeated with the switch closed. (It was noted that during the descending speed run the input power was a few percent lower than for the same speed during the earlier ascending speed run; this was presumably due to reduced friction as the brushes and/or bearings became heated. In plotting the data the losses for both runs were averaged which gave a conservative result since the losses shown in the figures exceed the minimum values measured).

The upper curve (a) shows the motor armature input power with a constant motor field current of 6 amperes as the speed is varied with no generator magnet excitation and is seen to reach a maximum of 4782 watts as the speed is increased to 6500 rpm.

This presumably represents the power required to overcome friction and windage losses in the motor, generator, and drive belt, and are assumed to remain essentially constant whether the generator is producing power or not [12].

Curve 14b shows the increase of motor armature power over that of curve (a) that results from energizing the generator magnet with a current of 16 amperes but with the generator output switch open so that there is no output current (and hence no output power dissippation).

This component of power (which is related to the increase of drive motor power with increased magnet current as shown in **Figure 11** as discussed above) might also be present whether or not the generator is producing output current and power, although this is not so evident since the output current may affect the magnetic field distribution.

Curve 14c shows the further increase of motor armature input power over that of curves (a) plus (b) that results when the output switch is closed, the generator magnet is energized and output current is produced.

It is certainly not zero or negligible but rises to a maximum of 802 watts at 6500 rpm. The total motor armature input power under these conditions is thus the sum of (a), (b), and (c) and reaches a maximum of 6028 watts at 6500 rpm.

The big question has to do with the generated output power. The measured output current at 6500 rpm was 4776 amperes; the voltage at the metering brushes was 1.07 volts.

Using a correction factor derived from **Figure 12** and assuming a common internal voltage drop due to a calculated disk resistance of 38 microohms, a computed internal generated potential of 1.28 volts is obtained which if multiplied by the measured output current indicates a generated power of 6113 watts.

All of this power is presumably dissipated in the internal and external circuit resistances, the brush loss due both to the brush resistance and the voltage drops at the contact surfaces between

the brushes and the disk (essentially an arc discharge), and the power dissipated in the 31.25 microohm meter shunt.

It still represents power generated by the machine, however, and exceeds the 802 watts of increased motor drive power due solely to closing the generator output switch and causing output current to flow by a factor of 7.6 to 1.

If the 444 watts of increased input power that resulted from energizing the magnet with the output switch open is assumed to have been converted to generated output power and hence should be included as part of the total increased drive motor power required to produce generated output, the computed 6113 watts of generated power still exceeds the total input power of 444 watts plus 802 watts by a factor of 4.9 to 1.

The computed output power even slightly exceeds the total motor armature input power including all frictional and windage losses of 6028 watts under these conditions (although the total system effeciency is still less than 100% because of the generator magnet power of approximately 2300 watts and motor field power of about 144 watts which must be added to the motor armature power to obtain total system input power).

It would thus seem that if the above assumptions are valid that DePalma correctly predicted that much of the generated power with this kind of machine is not reflected back to the motive source.

Figure 15 summarizes the data discussed above.

To further examine the question of the equivalence between the internally generated voltage at the main output brushes and that measured at the metering brushes, a test was made of the metered voltage as a function of speed with the generator magnet energized with a current of 20 amperes both with the output switch open and closed. The resulting data is shown in **Figure 16**.

The voltage rises to about 1.32 volts at 6000 rpm with the switch open (which is close to that obtained by DePalma) and drops 0.14 volts when the switch is closed and the measured output current is 3755 amperes, corresponding to an effective internal resistance of 37 microohms.

Even if this were due to other causes, such as armature reaction, it does not seem likely that there would be a large potential drop between the output and metering brushes because of the small distance, low magnetic field (and radial differential voltage), and large mass of conducting disk material.

Internal currents many times the measured output current of almost 4000 amperes would be required for the voltage difference between the outer metering and output brushes to be significant and invalidate the conclusions reached above.

A further method of testing the validity of the assumed generated output potential involved an examination of the voltage drop across the graphite brushes themselves.

Many texts on electrical machinery discuss the brush drop in machines with commutators or slip rings. All of those examined agree that graphite brushes typically have a voltage drop that is essentially constant at approximately one volt per brush contact when the current density rises above 10-15 amperes per square centimeter.

To compare this with the Sunburst machine the total brush voltage was calculated by subtracting the IR drop due to the output current in the known (meter shunt) and calculated (disk, shaft, and brush lead) resistances from the assumed internally generated output voltage. The result in **Figure17** shows that the brush drop obtained in this way is even less than that usually assumed, as typified by the superimposed curve taken from one text.

It thus seems probable that the generated voltage is not significantly less than that obtained from the metering brushes, and hence the appropriateness of the computed output power is supported.

Conclusions

We are therefore faced with the apparent result that the output power obtained when the generator magnet is energized greatly exceeds the increase in drive power over that needed to supply losses with the magnet not energized. This is certainly anomalous in terms of convential theory. Possible explanations?

1. There could be a large error in the measurements resulting from some factor such as noise which caused the digital meters to read incorrectly or grossly inaccurate current shunt resistances.

If the measured results had shown that the computed generated output power exceeded the input drive power by only a few percent this explanation would be reasonable and would suggest that more careful calibration and measurements might show that the results described above were due to measurement error.

With the data showing such a large ratio of generated power to input power increase, however, in my opinion this explanation of the results seems unlikely.

(A later test showed that the digital meters are insensitive to a large AC ripple superimposed on the measured DC, but within their rated accuracy of 0.1% give a true average value).

2. There could be a large difference between the measured voltage at the metering brushes and the actual generated voltage in the output brush circuit due to armature reaction, differences in the external metering and output circuit geometry, or other unexplained causes.

As discussed above the various data do not seem to support this possibility.

3. DePalma may have been right in that there is indeed a situation here whereby energy is being obtained from a previously unknown and unexplained source.

This is a conclusion that most scientists and engineers would reject out of hand as being a violation of accepted laws of physics, and if true has incredible implications.

4. Perhaps other possibilities will occur to the reader.

The data obtained so far seems to have shown that while DePalma's numbers were high, his basic premise has not been disproved. While the Sunburst generator does not produce useful output power because of the internal losses inherent in the design, a number of techniques could be used to reduce the friction losses, increase the total generated voltage and the fraction of generated power delivered to an external load.

DePalma's claim of free energy generation could perhaps then be examined.

I should mention, however, that the obvious application of using the output of a "free-energy" generator to provide its own motive power, and thus truly produce a source of free energy, has occurred to a number of people and several such machines have been built.

At least one of these known to me [13], using what seemed to be a good design techniques, was unsuccessful.

Footnotes

1. DePalma, 1979a,b,c, 1981, 1983, 1984, etc.
2. For example, *Satellite News*, 1981, Marinov, 1984, etc.
3. Martin, 1932, vol. 1, p.381.
4. Das Gupta, 1961, 1962; Lamme, 1912, etc.
5. See, for example, Bumby, 1983; Bewley, 1952; Kosow, 1964; Nasar,1970.
6. There has been much discussion on this point in the literature, and about interpretation of flux lines. Bewley, 1949; Cohn, 1949a,b; Crooks, 1978; Cullwick, 1957; Savage, 1949.
7. DePalma, op. cit.
8. Kimball, 1926; Zeleny, 1924.
9. Bumby, Das Gupta, op. cit.
10. DePalma, 1980.
11. Wilhelm, 1980, and personal communication.
12. The increase in motor losses with increased load are neglected in this discussion because of a lack of accurate values for armature and brush resistances, magnetic field distortion resulting from armature reaction, etc. Such losses, while small, would be appreciable, however; their inclusion would further increase the ratio of generated to drive power so that the results described are conservative.
13. Wilhelm, 1981, and personal communication.

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[DePalma, 1979b] - Bruce DePalma: "The N-Machine", Paper given at the World Symposium on Humanity, Pasadena, CA, 12 April 1979. (Describes background, development of "free-energy" theories)

[DePalma, 1979c] - Bruce DePalma: "ROTATION OF A MAGNETIZED GYROSCOPE", *Simularity Institute Report* #33, 16 July 1979. (Describes design of Sunburst homopolar generator)

[DePalma, 1980] - Bruce DePalma: "Performance of the Sunburst N-Machine", Simularity Institute, Santa Barbara, CA, 17 December 1980. (Description of tests and results)

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[Wilhelm, 1981] - Timothy J. Wilhelm: "INVESTIGATIONS OF THE N-EFFECT ONE-PIECE HOMOPOLAR DYNAMOS, ETC. (Phase II)", Stelle, IL, 10 June 1981. (Design and tests of improved homopolar generator/motor)

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Figure 1a & 1 b ~ Not shown (poor quality image)

Figure 2 ~ Sunburst Homopolar Generator (side view):

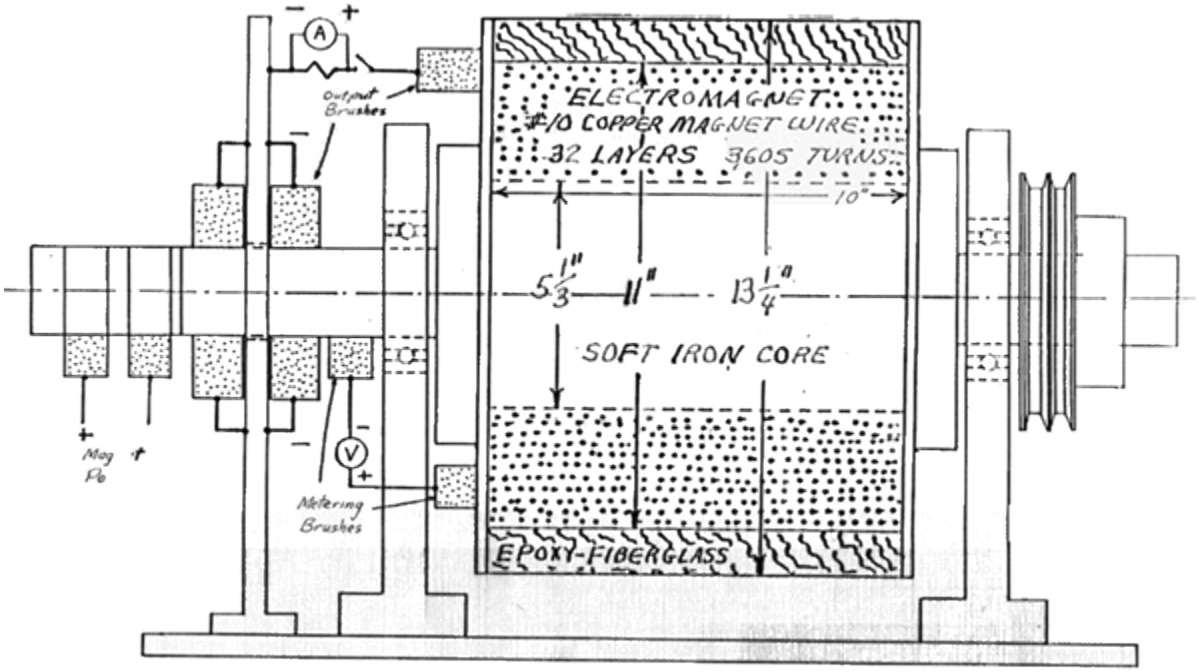


Figure 3 ~ Sunburst Homopolar Generator; output (brush) end view:

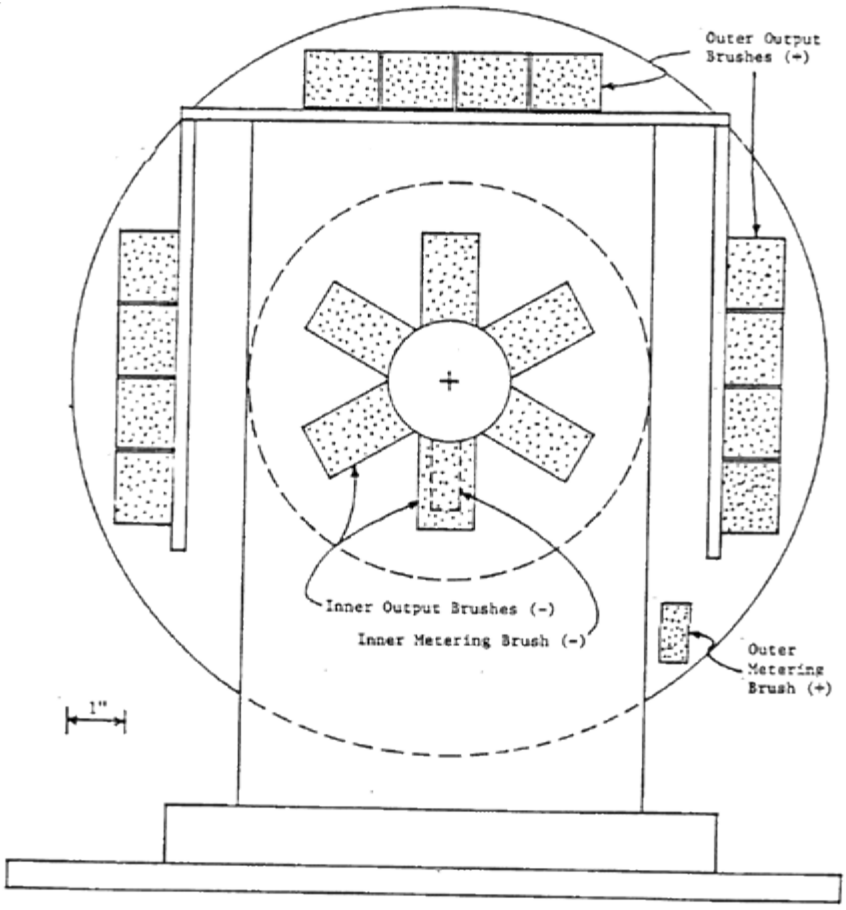
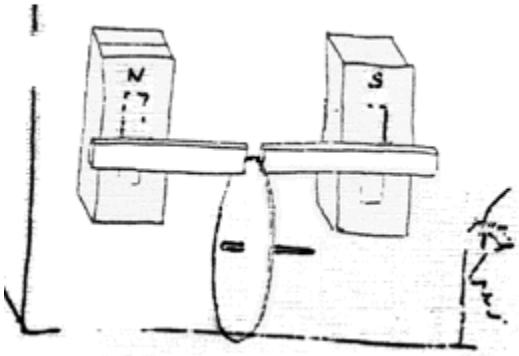


Figure 4 / Figure 5 ~ Transcription of Faraday's first experiment showing generation of electrical power in a moving conductor (Faraday's Diary, 28 October 1831):



99. Made many expts. with a copper revolving plate, about 12 inches in diameter and about 1/5 of inch thick, mounted on a brass axle.

To concentrate the polar action two small magnets 6 or 7 inches long, about 1 inch wide and half an inch thick were put against the front of the large poles, transverse to them and with their flat sides against them, and the ends pushed forward until sufficiently near; the bars were prevented from slipping down by jars and shakes by means of string tied round them.

100. The edge of the plate was inserted more of less between the two concentrated poles thus formed. It was also well amalgamated, and then contact was made with this edge in different places by conductors formed from equally thick copper plate and with the extreme end edges grooved and amalgamated so as to fit on to and have contact with the edges of the plate. Two of these were attached to a piece of card board by thread at such *[99]

Figure 6 ~ Homopolar (Acyclic) Generator:

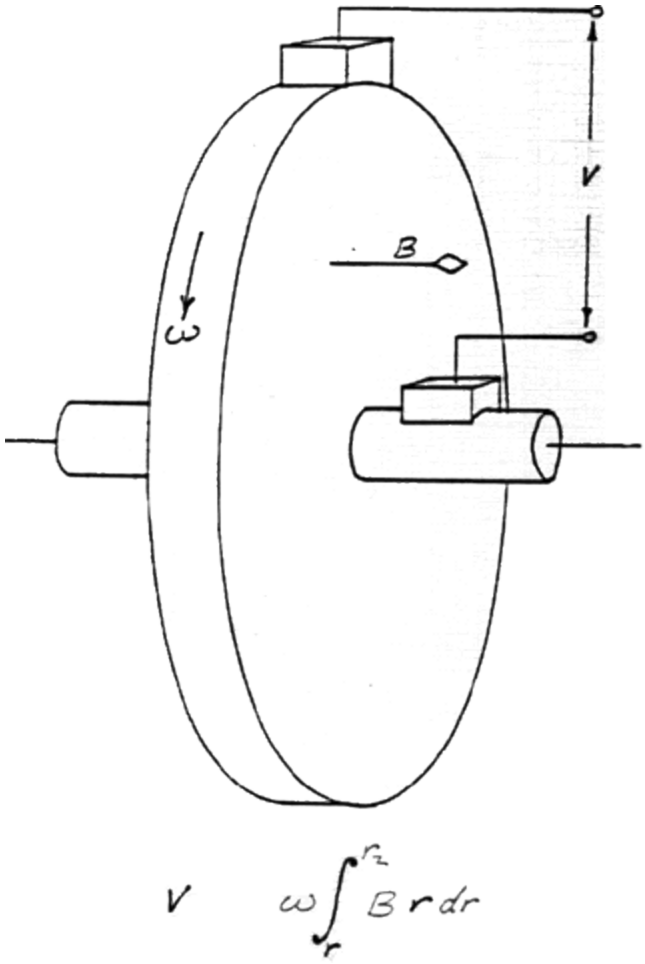
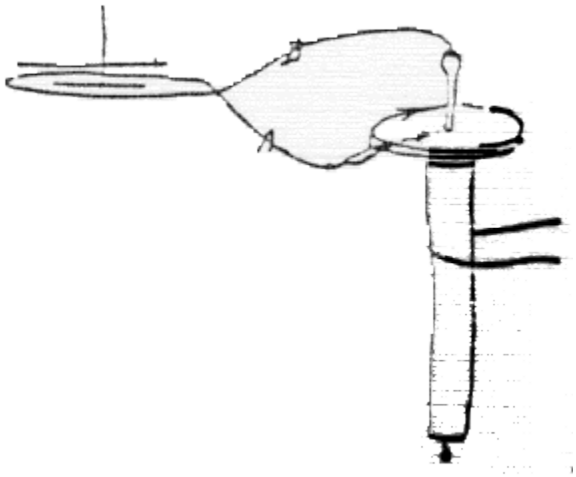


Figure 7 - Test of a rotating magnet by Michael Faraday (December 26, 1831):



255. A copper disc was cemented on the top of a cylinder magnet, paper intervening, the top being the marked pole; the magnet supported so as to rotate by means of string, and the wires of the galvanometer connected with the edge and the axis of the copper plate. When the magnet and disc together rotated unscrew the marked end of the needle went west. When the magnet and disc rotated screw the marked end of the needle went east.

256. This direction is the same as that which would have resulted if the copper had moved and the magnet been still. Hence moving the magnet causes no difference provided the copper moves. A rotating and a stationary magnet cause the same effect.

257. The disc was then loosed from the magnet and held still whilst the magnet itself was revolved; but now no effect upon the galvanometer. Hence it appears that, of the metal circuit in which the current is to be formed, different parts must move with different angular velocities. If with the same, no current is produced, i.e. when both parts are external to the magnet.

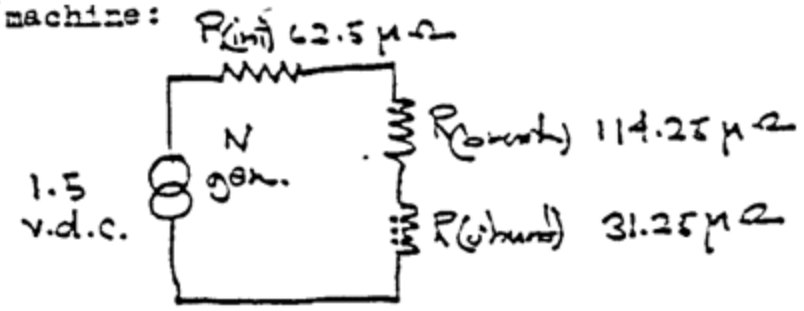
Figure 8 ~ Test data from report by Bruce DePalma:

PERFORMANCE OF THE SUNBURST HOMOPOLAR GENERATOR

Machine speed:	6000 r.p.m.
drive motor current no load	15 amperes
drive motor current increase when N machine is loaded	1/2 ampere max.
Voltage output of N generator no load	1.5 volts d.c.
Voltage output of N generator loaded	1.05 v.d.c.
Current output of N generator (225 m.v. across shunt @ 50 m.v./1600 amp.)	7200 amperes
Power output of N-Machine	7560 watts = 10.03 H.p.
Incremental power ratio = 7560/268	28.2 watts out/watts in
Internal resistance of generator	62.5 micro-ohms

Reduction of the above data gives as the equivalent circuit for the machine:

Reduction of the above data gives as the equivalent circuit for the machine:



R(internal) = 62.5 micro-ohms
R(brush) = 114.25 " "
R(shunt) = 31.25 " "

Figure 9 ~ Schematic diagram of generator test arrangement:

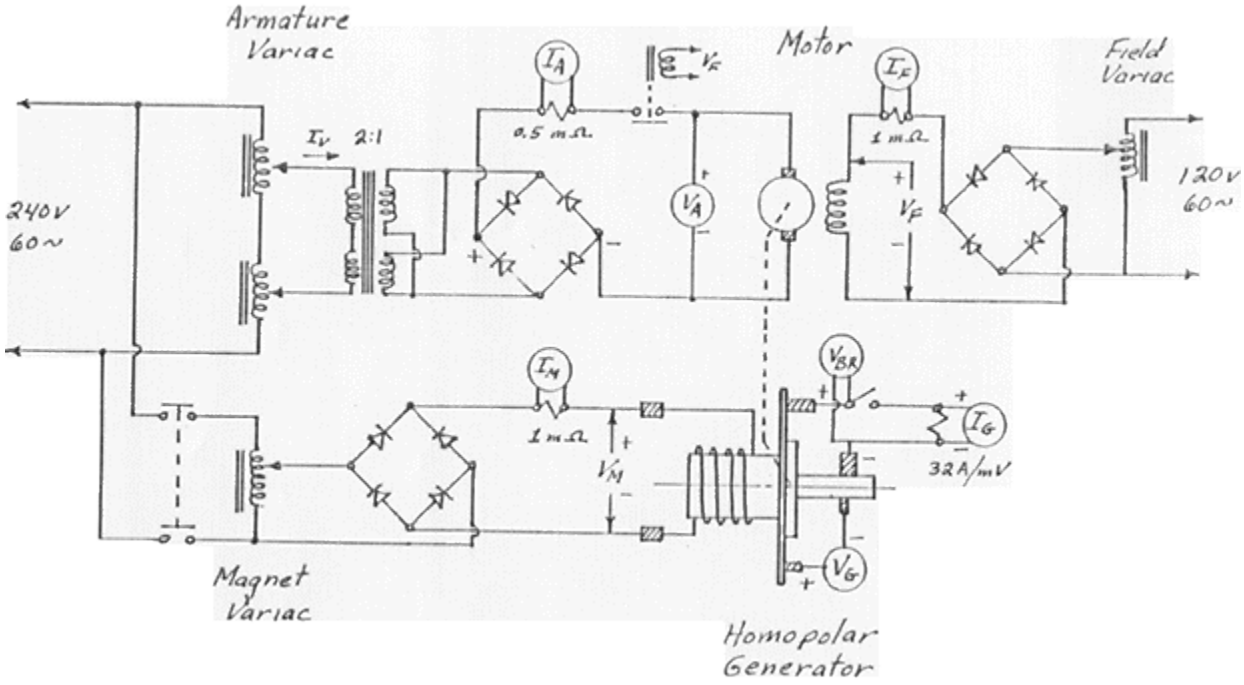


Figure 10a & 10b ~ Sunburst power unit & test panel (Not shown: poor image quality)

Figure 11 ~ Input power & generated voltage vs. magnet current:

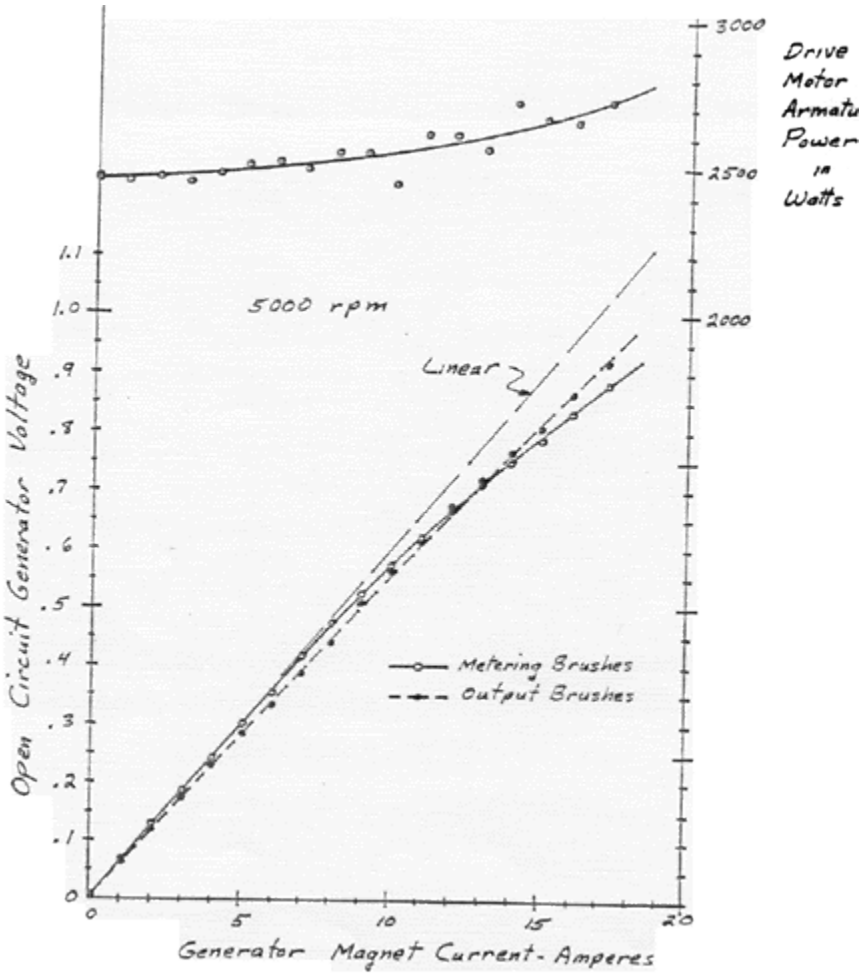


Figure 12 ~ metering & output brush voltage difference vs. magnet current:

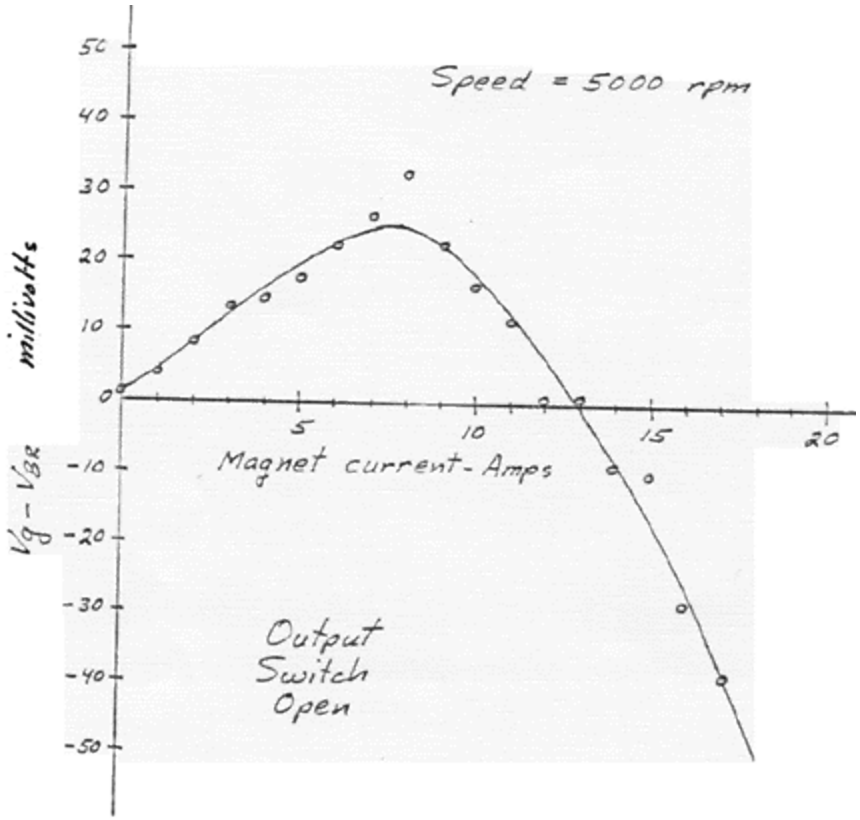


Figure 13 ~ Radial voltage distribution:

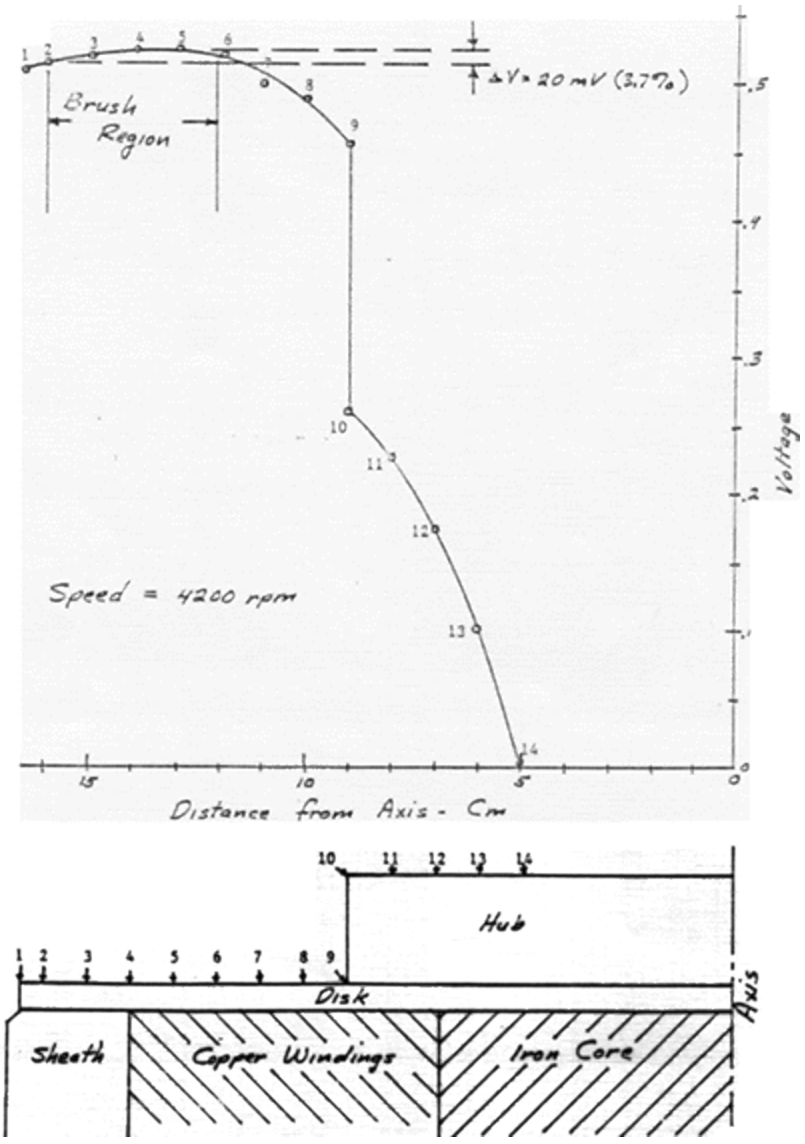


Figure 14 ~ Input & output power vs. speed:

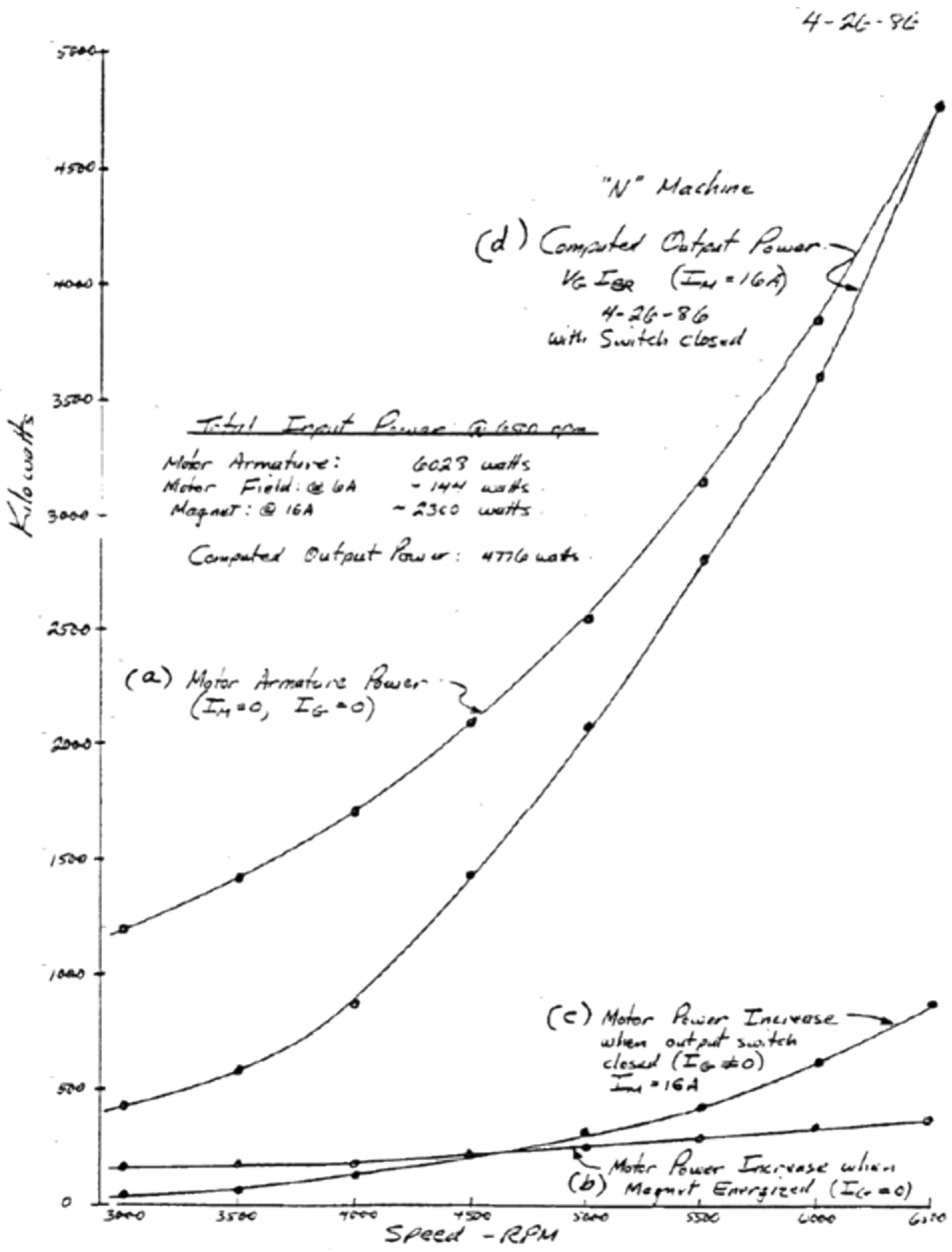


Figure 15 - Summary of test results at 6500 rpm:

	I	II	III
MAGNET POWER	OFF	ON	ON
OUTPUT SWITCH	OPEN	OPEN	CLOSED
SPEED	6500	6500	6500 RPM
MAGNET CURRENT	0	16	16 AMPERES
MOTOR ARMATURE POWER	4782	5226	6028

WATTS INCREMENT	444	802	WATTS
METER BRUSH VOLTAGE	.005	1.231	1.070 VOLTS
OUTPUT CURRENT	0	0	4776 AMPERES
GENERATED VOLTAGE		1.280	(1.280) VOLTS
GENERATED POWER	0	0	(6113) WATTS

HOMOPOLAR GENERATOR TEST - BIG SPRINGS RANCH APRIL 26, 1986

Figure 16 ~ Metering brush voltage vs. speed:

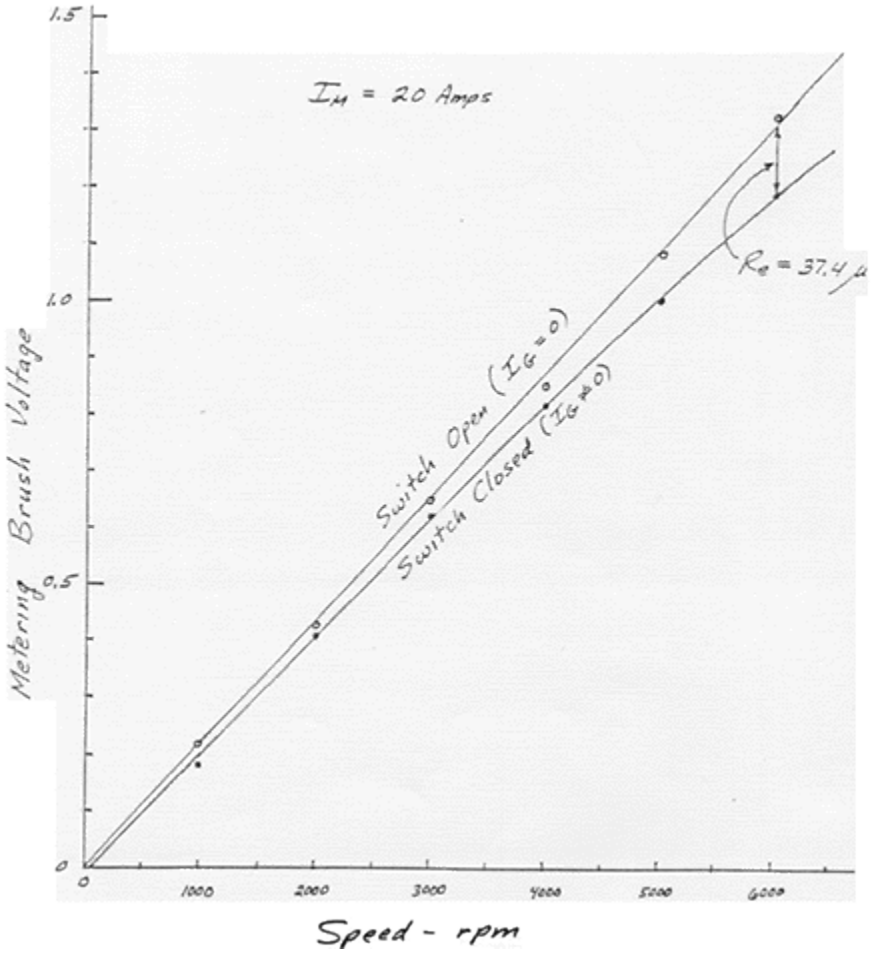


Figure 17 ~ Calcualted output brush voltage drop vs. current:

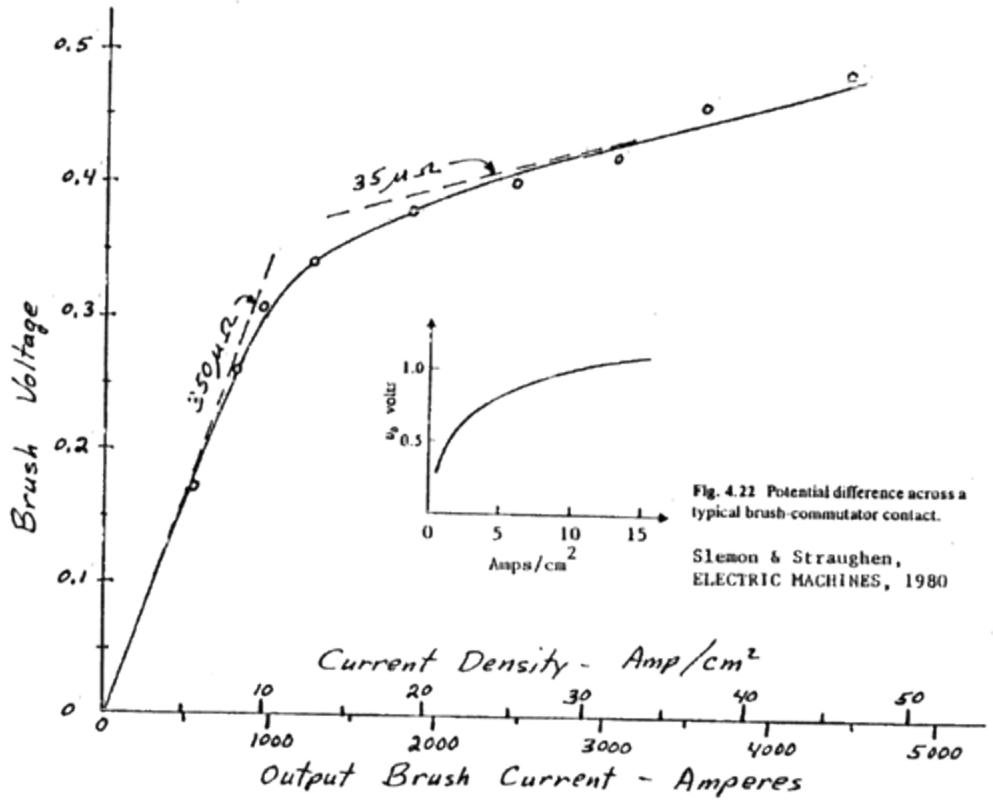


Fig. 4.22 Potential difference across a typical brush-commutator contact.

Slemon & Straughen, ELECTRIC MACHINES, 1980

Alexander I. KOLDOMASOV

[KOLDAMASOV]

Over-Unity Generator

http://oregonenergydigest.blogspot.com
Saturday, January 27, 2007

Conferences Reveal Energy Discoveries from Former Soviet Union

(Excerpt)

A.I. Koldomasov's device piezo-electrically vibrates a mix of waters through a special dielectric material to produce heat energy in more abundance than the energy which powers the oscillator.

The device is reported to put out 40 kilowatts of heat energy with only two kilowatts of electrical input. Last year Dr. Josef Gruber described a visit to the research institute where Koldomasov is managing engineer.

Koldomasov discovered the new energy source while observing cavitation-implosions in water such as found in "water hammer" in pipes. Gruber showed a photograph of the small device, filled with pure water mixed with only one per cent deuterium (heavy water).

Although there are no spark plugs or similar equipment, electrical discharge could be seen. Energy comes out in the form of both heat and electrical current.

Depending on kind and location of the magnets, DC or AC (electricity) may be observed. Gruber said testing revealed 2000 per cent excess energy.

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http://www.lenr-canr.org/acrobat/DolanTJnotesfromt.pdf

Notes from the 12th International Conference on Condensed Matter Nuclear Sciences

(November 27 – December 2, 2005, Yokohama)

T. J. Dolan

Steve Krivit (New Energy Times) and Vladimir Vysotskii (Kiev) told of experiments by A. Koldomasov (Russia), Hyunik Yang (Hy-En Research Co.) and others involving flow of high-pressure machine oil or water through a small orifice (1 mm). There are experiments Korea and in Edmonton, Canada, and theoretical work in Russia. Krivitt showed a videotape of the Canadian device in action. In boron-doped oil at 30 atm the color is tawny; at over 40 atm, it is white; at over 60 atm it is clear, with a blue plasma jet downstream of the orifice. At 70-80 atm there is a bright blue beam 6 mm in diameter, and at over 90 atm a green glow appears upstream of the orifice. Hard x-rays were observed from the luminous region. The researchers claim that excess heat is generated from fusion reactions (possibly protons plus boron-11) during collapse of cavitation bubbles, and they detected He-4 emission lines from the cavitating fluid.

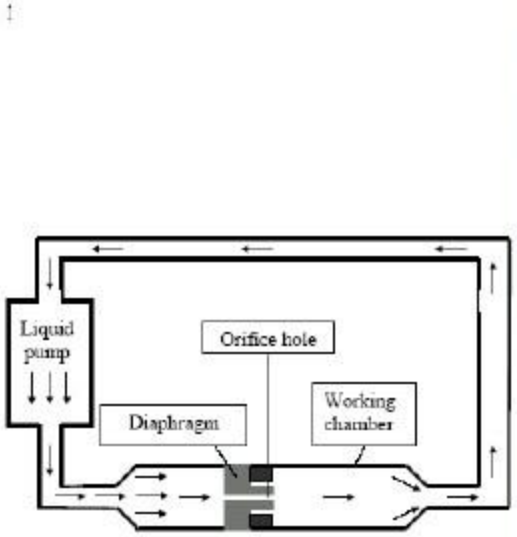

Figure 1. Scheme and general view of the

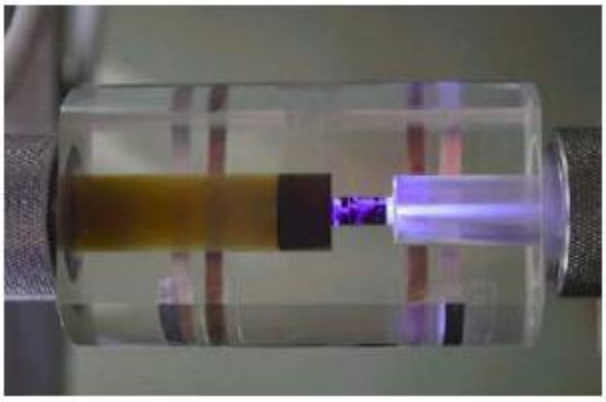

Figure 5. Generation of the directed bright light beam in the turbulent machine oil

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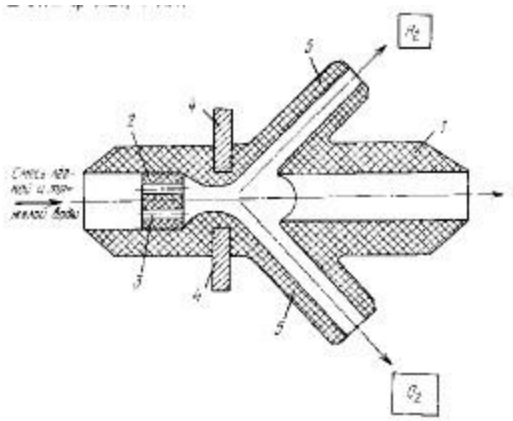
RU2232210

[Complete Patent: PDF Format]

ELECTRIC POWER INSTALLATION FOR PRODUCTION OF HYDROGEN AND OXYGEN

7-10-2004



Inventor: GNEDENKO V G (RU); GORJACHEV I V (RU); KOLDOMASOV A I (RU); KHAJUNIK JANG (KR)
Classification: - international: C25B1/02; G21C1/00; C25B1/00; G21C1/00; (IPC1-7): C25B1/02; G21C1/00
Abstract --- FIELD: production of hydrogen and oxygen. ^ SUBSTANCE: the invention is pertinent to electric power installations. The installation intended for production of hydrogen and oxygen, and also for production of the energy emitted at fusion reactions going in a reactor. The installation contains: a dielectric resistant to cavitational emission housing for intake and gating of the dielectric medium in the form of a mixture of light water and heavy water, an insert mounted in the housing and made out of a dielectric material susceptible to cavitation emission and provided at least with two holes allowing an exit through them of the dielectric medium. The installation is supplied with a impulsator, a pump to deliver the working dielectric medium under pressure, a deflecting system of charged particles and, at least, two branch-pipes electrically isolated from each other and linked with vessels for hydrogen and oxygen collection. At that at exit of the insert in the housing there is a narrowing in the form of Laval's nozzles, behind it along the stream run on the housing there is a deflecting system mounted, behind which the branch-pipes are located. The deflecting system may be electrostatic or magnetic. The invention ensures expansion of functionalities of the installation. ^ EFFECT: the invention ensures expansion of functionalities of the installation.

A.I. Koldomasov. *Nuclear Fusion in Electrical Charge Field. Fundamental problems of natural science and engineering.* Volume 1. St.-Petersburg, 2000. 167 pages

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http://blake.montclair.edu/~kowalskil/cf/216koldamasov.html

Too Good to be True?

Ludwik Kowalski
Department of Mathematical Sciences

Montclair State University, Upper Montclair, NJ, 07043
(5/5/05)

One of the most important achievements of the 19th century physics was the discovery that a well defined amount of mechanical work is needed to generate one unit of heat -- not less and not more. Joule demonstrated this in a well known paddle wheel experiment. Water was forced to flow through small holes in the paddles of a rotating wheel and the amount of heat was measured calorimetrically. But, at a recent conference, a Russian scientist, A.I. Koldamasov (1), described an exception from this rule. He claims to have a device in which the heat to work ratio is twenty times larger than what would be allowed according to Joule's equivalence rule.

His device, named reactor, is similar to Joule's paddle wheel. But water, free of ions (resistivity 1011 ohm/m), is forced to flow through holes (diameters 1-2 mm) drilled in a plate made from the dielectric material (rather than from a metal). After reviewing basic concepts of thermonuclear physics Koldamasov writes: "On the basis of the above theoretical ideas, a nuclear reactor producing energy of nuclear fusion reactions was designed and tested (see Fig. 1). The reactor operation is stable and well controllable. It gives 20 units of useful power per unit of supplied power. Furthermore, it is possible to obtain power both in the form of heat and directly electric energy, omitting steam water cycle. According to the consumer's needs, the electric energy can be of both direct and alternating current. [Russian patent reference is given.] . . .

The working fluid is fed by a gear pump under the pressure of 5 to 7 MPa; the channel is 25-30 cm long, and the orifice diameter is 1-2 mm. By changing the electric motor rotation rate, we change the frequency of flow pulsation's and reach the resonance frequency of the orifice, which causes intensive cavitation. Under the action of this cavitation, the plate material emits electrons from the input edge, which are carried away by the flow, and at the output edge a high-density positive charge is formed (see Fig. 6). The charge is annular, its density is practically uniform, and it constitutes a medium temperature plasma ~10000 K with the density ~104 J/cm3. If heavy water possessing the same dielectric properties as the working fluid is added to the outflowing medium, then nuclear fusion reactions arise in the zone of influence of the charge."

What kind instruments were used to demonstrate occurrence of nuclear reactions? I was not able to find the answer to this question in the Koldamasov's paper. Here is how this paper ends: "The number of deuterium atoms collisions, and hence the magnitude of the released energy, depends on heavy water concentration in the working fluid. In our experiments we used a mixture with the ratio 1:100 (1 part of heavy water per 100 parts of light water). The continuous operation time was up to 100 hours. The experiments are entirely reproducible." Who is Koldamasov? Where were his experiments performed? Who are his coworkers? How much of "excess energy" was generated in 100 hours? Not knowing how to answer such questions I turned to the Internet.

The first item that came up, after typing "Koldamasov" indicates that reproducible results were first reported by the author seven years ago. Here is the extract from what was delivered by Google: "Six authors who stated 100% reproducibility of the effects detected are Bazhutov, Kanarev, Karabut, Savvatimova, Notoya, and Koldamasov."
And here is another earlier reference (2). On Hideo Kozima's website:

http://web.pdx.edu/~pdx00210/News/CFRLEngNews/CFRLEN35.htm

I see a list of papers read at the 9th Russian Conference on Cold Nuclear Transmutation of Chemical Elements (September/October, 2001). It contains references (3) and (4). The session at which these papers were presented was chaired by A. B. Karabut, the author of what I described in item 13. The device is said to generate twenty times more electric energy that is needed to run its motor. Why is it not manufactured and used all over? I suspect that the 100% reproducibility claim was found to be highly exaggerated. Somebody probably tried and failed to produce a commercially successful gadget.

References:

1) A.I. Koldamasov at "Russian Conference on Cold Fusion and Ball Lightning," Sochi, Russia, 2002.

2) A. I. Koldamasov. Nuclear Fusion in Electrical Charge Field. Fundamental problems of natural science and engineering. Volume 1. St.-Petersburg, 2000. 167 pages."

3) Koldamasov A.I. "Principles of Work of New Type Nuclear Reactor."

4) Baranov D.S. "Investigation of the Radiation Effects in the Koldamasov Cell."

ADDENDUM:

While searching on the Internet I found a useful compilation about "who is who" in Russian cold fusion research. The authors are I.V. Goryachev, and Y.N. Bazhutov; the title is " Organization, current status and main results of Russian research in cold fusion and transmutation of chemical elements." It shows that the author of the last reference, a Ph.D. physicist, is from the Research Institute of High Temperatures, Russian Academy of Sciences in Moscow. His specialty is listed as experimental " investigations of the methods of initiating nuclear reactions in deuterated dielectric liquid under the conditions of cavitation." The name Koldamasov does not appear in the downloaded document: <GoryachevIorganizati.pdf>

Appended on 5/22/05:

1) On 5/13/05, after finding the sentence quoted below (at the website of CNW -- Group Canada NewsWire), I sent an e-mail message to Dr. Yang, the Chairman & Founder of the Hy-En Group of companies:

Dear Dr. Hyunik Yang:

Browsing the Internet (before going to the MIT cold fusion colloquium next Friday) I found this description of your commercial activities:

". . . The three main applications derived from "Cold Fusion" are massive production of low cost hydrogen and heat energy for commercial and industrial applications steam or hot water and electric power. . . ."

Please provide a reference (or references) about the method used to obtain electric power via cold fusion. Thanks in advance,
Ludwik Kowalski

2) The above message was not answered. During the MIT colloquium I heard that Koldamasov died and that his invention is going to be used by a company whose name is iESiUSA (Innovative Energy Syatems Inc.). Materials on the company's website <WWW.iesiusa.com> do not refer to cold fusion. But they are worth quoting.

a) "Innovative Energy Solution Inc. is a leader in developing reliable next generation, clean energy technologies. iESi owns several patents related to its proprietary hydrogen generation, heat generating and waste heat recovery technologies."

b) "The new clean energy plant will enable Norwood Foundry to generate six times (12 MW) more electricity than it consumes (2 MW) at its foundry located in Nisku, Alberta, Canada." That is indeed extraordinary - consuming electric energy at the rate of 2 MW and generating it at the rate of 12 MW, presumably at the same time. This would be a giant perpetual motion machine. Recall that Koldamasov's device had the output/input ratio of twenty, not six. But even a factor of two would be extraordinary.

c) "The revenue to be generated through the joint venture project is expected to exceed $6 million annually. Under the joint venture, iESi is responsible for the implementation of its revolutionary clean energy technologies, while Norwood [the old existing foundry] will finance the project. . . . The plant is slated to be fully operational by the third quarter of 2005. . . .iESi owns several patents related to its proprietary hydrogen generation, heat generating and waste heat recovery technologies. Headquartered in Las Vegas, Nevada, iESi also has offices in Canada, Europe and South Korea." I hope that my retirement savings are not invested in iESi.

d) Innovative Energy Solutions Inc. (iESi) today announced that it raised $3 million in its first round of financing. The investor group consists of more than 300 individuals from Canada, Europe and the United States. iESi will use the investment to accelerate product development, push market penetration and establish manufacturing facilities in Alabama. 'The success of our initial funding is encouraging to iESi as we focus on executing our business endeavors and growing the company. The first round closed with an oversubscription of 200,000 shares, which demonstrates a substantial interest in our energy generating technologies and what they can do for a fuel-based economy,; said Ron Foster, chairman, iESi. iESi will open its second round of financing on July 29, 2004, by offering 500,000 shares at $4 apiece. Established in 2003, iESi's mission is to offer clean, viable solutions to traditional energy sources, and reduce the world's dependence on oil from the Middle East. iESi is organized into three broad divisions to maximize return on its intellectual capital and intellectual property."

Too good to be true? Yes, I think so. But the company website provides many claims that are worth discussing with students. Physics teachers should take advantage of this. Something is not right in this business of promoting nonexistent technologies. In unit #224 I referred to a colloquium presentation of Robert Rines, the patent counselor at MIT. At one point he asked a question; "what harm can possibly result from granting a patent whose validity cannot be established at sufficiently high level of certainty?" He was referring to patents in the area of cold fusion. Nobody, he said, will be stupid enough to invest in things that are still uncertain. I now tend to disagree. A granted patent gives some kind of legitimacy to unjustified commercial claims. Patents can be viewed as instruments of protection of citizens. Yes, I know that such instruments are not very effective. But they are better than nothing. Citizens should also be economically protected by other legal means.

Addendum (5/25/05):

Here is the content of a document, dated as 5/23/05, that I found on the Internet. It provides background information about promoters of cold fusion technology.

EDMONTON, Alberta, May 23 /PRNewswire/ -- Innovative Energy Solutions, Inc. (iESi) today announced the arrival of the Company's co-founder and Chief Technical Officer, Hyunik Yang, Ph.D. and Dr. Nahm Cho in Sherwood Park, Alberta, just southeast of Edmonton. The recent relocation of Dr. Yang and Dr. Cho should expedite the efforts that are already well underway on the Direct Electrical Power, Heat and Hydrogen Generation units and allow the Company's team of scientists to advance the impressive work they accomplished for iESi while in South Korea.

"Much of iESi's proprietary intellectual property is based on the research in the field of quantum energy generation authored by Dr. Yang," said Patrick Cochrane, CEO, iESi. "Drs. Yang and Cho and our team of scientists are continually conducting research to enhance iESi's technological offerings and we look forward to their continued presence in Edmonton."

"Dr. Cho and I are pleased to finally be here in Canada. We're eager about working closely together with our scientific and management teams to implement such a worthy offering that will allow the world to go from dependence on energy providers to energy self-sufficiency," said Dr. Hyunik Yang, Chief Technical Officer, iESi.

As concern grows for the world's natural resources, energy efficiency is gaining worldwide attention. iESi is poised to be the leader in the development of innovative energy solutions through its safe and patented plasma processes which included Direct Electrical Power Generation, low-cost Hydrogen Generation and low-cost Heat Generation, all three of which were developed by Dr. Yang.

In his career, Dr. Yang has also held positions as professor at Hanyang University and as senior research engineer at Hyundai Electronics. Dr. Yang has designed several new inventions in the field of quantum energy and cold fusion. Dr. Yang received his Engineering B.S. from Hanyang University in South Korea, and completed his Engineering M.S., Ph.D. and post-doctoral work at Columbia University in New York. He is a member of the American Society of Mechanical Engineers, Society of Automobile Engineers, Korean Society of Mechanical Engineers, Russian

Academy of Natural Science, Korean CAD/CAM Society and the Korean Society of Machine Tool Engineers. Since 1997, Dr. Yang has been listed in the Who's Who in the World, and in the Who's Who in Science and Engineering since 1998.

Dr. Cho also held positions as professor at Hanyang University. Dr. Cho is the author of four patents in South Korea and is an expert in the field of Nuclear Transmutation and Fusion. Dr. Cho received his Precision Mechanical Engineering B.S. and M.S. from Hanyang University in South Korea, and completed his Ph.D at the Tokyo Institute of Technology. He is a member of the Japan Society of Mechanical Engineers, Japan Society of Precision Engineers, Korean Society of Mechanical Engineers, Korean Society of Precision Mechanical Engineers, Korean Society of Manufacturing Engineers and the Micro Biochip Center.

About iESi --- Innovative Energy Solution Inc. (iESi) is a leader in developing next generation clean energy technologies. iESi owns several patents related to hydrogen generating technology, heat generating technology and waste heat recovery. The Company's Corporate Offices are in Las Vegas and iESi also has offices in Canada, the United Kingdom and Europe. For more information please visit: http://www.iesiusa.com

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http://blake.montclair.edu/~kowalskil/cf/230baranov.html

Two Russian Papers

Ludwik Kowalski

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(6/20/05)

1) Please be aware that my unit #229 now has two added sections, at the end. They were not there when the unit was posted, several days ago.

2) It seems to me that we really need a forum for discussion, among cold fusion researchers. Unfortunately, the discussion list of ISCMNS, promised at ICCF11, did not materialize. And what happened to the online journal promised one year earlier? Let me make Éa suggestion. I have an idle discussion list at the university server; it can become a forum we need. To be a participant simply send me a private message whose subject line should say: “Discussion of CF.” The first line (in the body of the message) should show your name (first, then last) followed by the e-mail address. The next line (or lines) should say why you consider yourself to be a cold fusion researcher. Participation in at least one of the ICCF* conference, for example, is a sufficient reason, as far as I am concerned. My e-mail address is <kowalskil@mail.montclair.edu>. The list will be activated as soon as the number of participants exceeds 20. Please, send this invitation to serious CF researchers you know; not everybody will see it here. Cut this paragraph and paste it into messages you sent.

3) Today I received two Russian papers from ? one of the readers. They seem to be related to the device invented by Koldamasov and Yang. (see units #216, #226 and #229). These papers prompted me to start this unit. I will try to translate them and make some comments. The copies of pages mailed to me do not identify the place of publication. But the sender wrote that the papers were "published in 2001, following the 2000 Sochi conference."

Paper 1: "Studying of thermal and radiation effects in Koldamasov's cell", by D.S. Baranov.

Paper 2: "An experimental setup based on Koldamasov's cell". by A.P. Andreev, D.S. Baranov, A.K. Molodov, A.K. Pokrovski and N.N Sikavatkin.

The authors of these papers are from Moscow (Scientific Institute of Crystallography, Russian Academy of Science, and MRTI (?)).

Translation of sections from Paper #2 ---

Abstract: A temperature increase of short duration ø was observed in Koldamasov's cell when heavy water was locally added to the working fluid. The temperature did not changed when ordinary water was added, under analogous conditions. Adding lithium chloride to water resulted in registration of radiation in the scintillation detector.

This study was undertaken to reproduce previously reported results (1,2) and to enlarge the scope of a more recent investigation (3). The central element of that installation, the Koldamasov cell, was made from the transparent organic glass. Bright glowing discharge (plasmoid) was observed in front of the opening in the insertion when cavitation was taking place. The insertion changes the cross section, available to the fluid, by two orders of magnitude. Pressures in cell were changed in the range of 10-40 atmospheres at the frequency of ~1000 Hz.

The working fluid was oil whose temperature was ~33 C. At that temperature the viscosity of heavy water exceeds the viscosity of ordinary water by ~20%. This, however, could not lead to a significant increase of friction (resulting from addition of heavy water) because the viscosity of oil is ~20 times higher than that of water. Sensitive calorimeters were used to measure difference in temperatures between the input and output of the cell. The electrical diagram is shown in Figure 1. It is essentially a Wheatstone bridge in which R1 and R2 are thermistors. Medical injectors were used to introduce heavy or ordinary water at the entrance of the pump. The injected volume was one cubic centimeter and the time of each injection was ~10 seconds. The time was sufficiently long to mix the injected water with ~ 1000 cubic centimeters of oil.

In the first experiment heavy water was injected first and ordinary water was injected later. In the second experiment ordinary water was injected before heavy water. Figure 2 shows that difference ?s in temperature occurred after injections of heavy water only. [In that figure changes in difference of temperatures are expressed in volts but the bridge was calibrated]. According to calibrations, changes shown in Figure 2 were the same as from the injection of one cubic centimeter of water at 100C. Trying to optimize generation of excess heat one observed cases in which no excess heat was generated and cases when changes in temperatures were sufficiently high to melt ftoroploast insertions. Destruction of the insertion was observed three times, but

only when oil was mixed with several cubic centimeters of heavy water. Insertions were never destroyed when oil contained no heavy water (even at much higher temperatures and pressures).

Radiation emitted by the cell was measured by using a 5 cm by 5 cm cylindrical NaI detector. The detector was ~8 cm from the insertion. Radiation entering the detector had to pass through an aluminum foil of 0.5 mm, 5 cm of organ ?ic glass and a 5 mm layer of ftoroplast. [In other words it consists of gamma rays.] The setup was calibrated by using the annihilation line (511 keV) and a sodium line of 1460 keV. The multichannel analyzer spectra are shown in Figure 3. . . . [The background does not change significantly when the motor of the pump is turned on to off. A significant above-the-background component appears (in the gamma ray energies up to 250 keV) after 0.8 cubic centimeters of the water solution of lithium chloride, concentration 4 N, is injected into oil. The conclusion is:] Radiation measurements and temperature effects due to heavy water are with Koldamasov's findings and show that nuclear processes do take place in the cell.

[I am certain that scientists who prepared the last week demonstration in Emonson did not miss an opportunity to show, using a widely available detector, that gamma rays are indeed emitted from their setup. The setup generating excess heat at the ra Ëte of 10 MW must be much larger than the setup used by Baranov. When will the results of the last week demonstration be announced?]

References:

1. A. I. Koldamasov "Nuclear fusion in the field of electrical discharge;" 1995 Sochi conference report.
2. A.I. Koldamasov "Nuclear reactor;" Patent of Russian Federation #2152083
3. A.P. Andreev et al. (see paper 3 below).

Translation of sections from Paper #1 ---

Abstract: A compact experimental setup, analogous to that described by Koldamasov (1,2), was built. It shows that stable glowing discharge (plasmoid) is produced in the liquid under the influence of cavitation. [Does this mean that what was called "cavitational emission," in unit #229, stands for sonoluminescence?]

According to (1,2) a new approach approach is possible to generate thermonuclear energy. An independent confirmation of this could lead to a broad investigation of that approach. Direct c onfirmation of Koldamasov' work is difficult because the working fluid in his device was pure (double distillation) dielectric water. The reason is simple; the dielectric properties of pure water change drastically after it passes through the cell. Changed water must be purified before it can be reused.

In this investigation we tried to use a different working fluid -- organic oil. Dielectric properties of oil are more favorable but that substance is about 20 times more viscous than water. We were able to find conditions under which bright glow discharge (plasmoid) is formed in oil. The diagram of the setup is shown in Figure 1. [I shows a loop in which oil is forced to circulate

under pulsating pressure. Numerous technical details (pump rpm, pressures, frequen Ocies, etc. are provided. A set of three dots in the part of the article that I decided not to translate. Set of three dots below stand for was not translated] . . . The central element of that installation, the Koldamasov cell, was made from the transparent organic glass. It has a dielectric insertion with a narrow opening (cross section being 100 times smaller that in the tube through which the oil is supplied to the cell). Stable glowing discharge was observed at the entrance of insertions made from organic glass, ftoroplast and polysterol. It was observed when the insertion was made from vinoplast. Ftoroplast turned out to be the most effective when the pressure was ~30 atm. Appearance of plasmoid must be due to cavitation. . . . Characteristic speed of the fluid through the insertion opening (radius 0.5 mm) was 50 m/s. . . . ~

The total volume of working fluid was ~6 liters. It is remarkable that oil was not spoiled during its prolonged (`10 hours) circulation through the loop. An attempt to use less fluid liquid, a mixture oil and kerosine, also resulted in formation of plasmoid. But the pump deteriorated rapidly when that fluid was used. The setup is sufficiently compact to be used in practical applications.

References:

1. A. I. Koldamasov “Nuclear fusion in the field of electrical discharge;” 1995 Sochi conference report.
2. A.I. Koldamasov “Nuclear reactor;” Patent of Russian Federation #2152083

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http://www.newenergytimes.com/Library/2005KrivitS-ICCF12-Paper.pdf

INTRODUCTION TO A NEW METHOD TO INITIATE COLD FUSION / CONDENSED MATTER NUCLEAR REACTIONS

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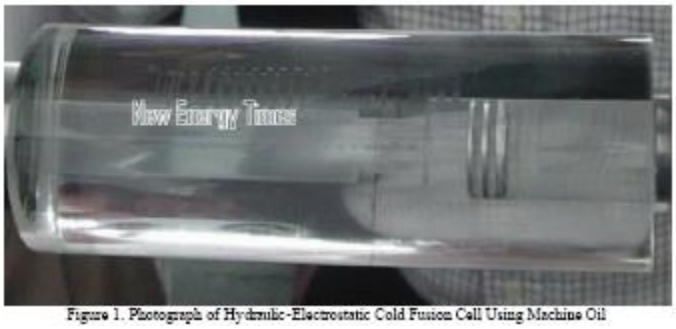

Figure 1. Photograph of Hydraulic-Electrostatic Cold Fusion Cell Using Machine Oil

ABSTRACT --- This is an introduction to the hydraulic-electrostatic cold fusion method that was first demonstrated to a small public group on June 6, 2005, in Edmonton, Canada. Observation of devices that appear to be 100 percent repeatable and of practical, commercial magnitude was seen.

1.1. Introduction

This work was demonstrated by a group managed by Hyunik Yang, professor ofmechanical engineering at Hanyang University, Korea. Other members of this research team are Alexandr Koldamasov (ret.) of the Russian National Research Institute of Atomic Engineering, Andrei Desyatov, deputy director of the Russian Aviation and Space Agency at the Keldysh Research Center in Moscow, Alla Kornilova, physics professor and director at Moscow State University, Vladimir Vysotskii, physics professor at Kiev Shevchencko University, and Nahm Cho, professor of mechanical engineering at Hanyang University, Korea.

A second group of Russians is associated with this research. They are Evgeny Pavlovich Velikhov, president of Kurchatov Research Institute, Gerasimovich Gnedenko, director of Kurchatov Research Institute, and Vital'evich Goryachev, associate director of Kurchatov Research Institute. Gnedenko and Goryachev are the assignees of a related Russian patent, No. RU2232210.

1.2. Brief Review of Current Progress in Cold Fusion

At the 16-year mark in cold fusion's evolution, progress toward a new source of energy has been consistent but slow. The current limitations are clearly evident. Weak reactions have been relatively easy to reproduce; however, few strong reactions have been reported.

Many researchers can demonstrate excess energy in the realm of 10 percent with very high repeatability, though only in the milliwatt range. [1]

Strong reactions, achievement of higher power levels, have been difficult to obtain. The largest energy gain reported so far has been 2,500 percent by the Energetics Technology group from Israel.[2] Reports from other researchers show power in the tens of watts; however, these experiments are rare and difficult to repeat.

1.3. Brief Review of Previous Fusion Cavitation Research

The idea of using cavitation, the creation of rapidly expanding and collapsing cavities in fluids (bubbles), has been studied for many years by fusion researchers.

Roger Stringham of First Gate Energies started using acoustic drivers to induce cavitation in 1989. As is typical with cold fusion experiments, his research uses palladium and deuterium as the main components as well as the acoustic driver. As expected from cold fusion, his experiments do not produce significant levels of neutrons, the signature of a hot fusion reaction. Stringham has reported excess energy, in the form of heat, of 40 watts.[3]

Rusi Taleyarkhan, a nuclear engineering and science professor with Purdue University, and colleagues published papers in Science [4] and Physical Review E[5] describing another variation of acoustic cavitation, technically known as acoustic inertial confinement fusion. As is typical with hot fusion, Taleyarkhan's method does not use any host metal. His experiment runs in a room-temperature environment, and the bulk of the test liquid in the cells is at temperatures ranging from 0C to 15C. The fusion reactions take place in deuterium-bearing bubbles during the time span when sonoluminescence light flashes come - implosion conditions associated with high temperatures, plasmas and high pressures.

The main components of the system are a resonant acoustic test reactor filled with deuterium-bearing fluid (acetone is one such fluid), the acoustic driver system and a nuclear particle-based bubble nucleation source.

Significant levels of neutron emissions, commensurate with the expected branching ratios of hot fusion, are reported with this method. No excess energy is reported so far with this method.

1.4. Mechanical Cavitation Using Hydraulic and Electrostatic Effects

The new cavitation method uses high hydraulic pressures, high velocities and electrostatic effects. Two configurations are known. The first pumps machine oil in a fully enclosed recirculating system. 2,000 percent excess energy, in the form of heat, is reported by Koldamasov.[6] The second configuration uses a partially enclosed recirculating system, and products of heat, steam, hydrogen and helium were reported to New Energy Times by Yang, though no data has been presented.

Figure 1. Photograph of Hydraulic-Electrostatic Cold Fusion Cell Using Machine Oil

1.5. Unique Characteristics of the Hydraulic-Electrostatic Cold Fusion Method This method differs markedly from both previous cold and hot fusion cavitation experiments. It differs from cold fusion work in that no host metal, such as palladium, is required. No deuterium gas or heavy water is required, and no electrochemistry is involved. The lack of electrochemistry requirements is a significant advance toward a commercial application, because electrochemistry is generally a very complicated, difficult-to-control environment.

The basic components of this method besides the cell, pictured above, are a pump motor used to recirculate the fluid and a heat exchanger to capture the heat energy.

Data has not been presented on the energy gain of the recent work; however, three cold fusion experts, electrochemist Martin Fleischmann (co-discoverer of cold fusion, and retired from the University of Southhampton), electrochemist Michael McKubre (SRI International), and physicist Peter Hagelstein have reported to New Energy Times that they have a high, though not absolute, level of confidence that the method is, in fact, exhibiting a positive energy balance.

In multiple demonstrations starting on June 6, 2005, Fleischmann, McKubre, Hagelstein and Krivit observed operators turn the device on and off at will, on demand. Observers noted that operators could increase or decrease the input to the machine, and in turn, the observers watched

the machine respond directly with a correlated heat energy production, as displayed on the control console.

Tadahiko Mizuno, a nuclear engineer with Hokkaido University, visited another laboratory in Korea on Sept. 27, 2005, and witnessed a similar device, though the available instrumentation was insufficient for him to verify the claims of neutron emissions. The qualitative characteristics of this method appear to be 100 percent repeatable, sustainable over a period of minutes to hours, and controllable.

1.6. Why Is This Cold Fusion?

Three dominant characteristics support the recognition of this method as a form of cold fusion. First, it apparently generates excess energy from hydrogen-based materials such as water or oil. Second, the reactions occur in a room-temperature laboratory environment. And third, based on reports from the Yang group, the branching ratios appear to follow those known of cold fusion experiments. Helium production is reported as the dominant byproduct, with relatively low levels of neutron and gamma emission.

1.7. Conclusion

Confidently confirming the validity of the claimed excess heat and nuclear products in this work is difficult because sparse data has been presented by the researchers. People privileged with more in-depth knowledge have been constrained by nondisclosure agreements. Reports of independent audits have been mentioned to New Energy Times, yet such audits have not been made available to New Energy Times; the reason given is that the audits are the private property of the commercial and investment parties who have paid for them.

The claims are, needless to say, startling, profound and possibly auspicious. However, further attention to this research will require more detailed data. New Energy Times will seek the cooperation of Yang's research team to perform an audit and encourage additional disclosures by the researchers at the next ICCF conference.

Acknowledgments

This project was made possible by a grant from the New Energy Foundation. The author wishes to thank Peter Gluck and Cindy Goldstein for their editorial assistance.

New Energy Times is a project of New Energy Institute Inc. and encourages new energy research, reports on claims of new technology, seeks independent validation of such claims, and works to encourage valid applications of that research to useful forms of energy.

References

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3. R. Stringham, "1.6 MHz Sonofusion Device," Proceedings of the Eleventh International Conference on Condensed Matter Nuclear Science, Marseilles, France (2004)

4. R. P. Taleyarkhan et al., "Evidence for Nuclear Emissions During Acoustic Cavitation," Science, Vol. 295 (2002)

5. R. P. Taleyarkhan et al., "Additional Evidence of Nuclear Emissions During Acoustic Cavitation," Physical Review E, Vol. 69, 036109 (2004)

6. A.I. Koldamasov, "Nuclear Fusion in Field of Electric Charge," Proceedings of the 6th Russian Conference, Sochi, Russia, p. 125-137 (1998)

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http://newenergytimes.com/Library/2005VysotskiiV-ObservationAndInvestigation.pdf.

OBSERVATION AND INVESTIGATION OF NUCLEAR FUSION AND SELF-INDUCED ELECTRIC DISCHARGES IN TURBULENT LIQUIDS

ALEXANDR I. KOLDAMASOV, et al.

[PDF]

The problems of stimulating and optimizing nuclear fusion using cavitation phenomena in different liquids are studied and discussed. The process of formation and mechanisms of excitation of directed laser-like beams in the volume of cavitating machine oil are studied. One of the analysed mechanisms of beam excitation is connected with stimulated nuclear reactions.

1. Introduction

The aim of this report is to present some preliminary results of experimental and theoretical investigations of the processes and phenomena connected with optimal fusion reactions in turbulent liquid targets...

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www.springerlink.com/index/M755567V27415325.pdf

Cavitation and Thermonuclear Fusion. Estimates of the parameters and a possible method of obtaining positive energy balance
Journal Doklady Physics Volume 48, Number 1 / January, 2003
ISSN 1028-3358 (Print) 1562-6903 (Online)

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http://www.iccf12.org/abstract_file/Thu-23.pdf

Observation and Investigation of He4 Fusion and Self-Induced Electric Discharges in Turbulent Distilled Light Water

A.I.Koldamasov, H. Yang, et al.

He4 production has been observed in an experimental setup which induces turbulence and cavitation in a flowing light-water solution containing B11. The assumed nuclear reaction, one of the most promising and ecologically benign, results from the absorption of a proton by the B11 nucleus, and yields three He4 nuclei: P + B11 -> 3He4.

In this reaction, a substantial amount of energy (8.7 MeV) is released without the emission of neutrons or hard radiation, and the reaction products are non-radioactive.

Production of He4 was detected by observing the spectral emissions from a stationary luminous region of turbulent cavitating fluid immediately downstream from a flow-controlling orifice channel. He4 emission lines identified in the spectra were emitted with intensities indicating concentrations of helium substantially above background. These emissions were only observed when using B11 solutions in the experimental setup, and after careful parametric optimization of the system. Additionally, a high rate of self-induced electrical discharges was observed traversing the luminous region and extending downstream for several centimeters. The effect of these discharges on helium production is currently under study.

Initial calorimetric measurements indicate a significant evolution of thermal energy along with the production of helium, as expected from the mass deficit of the reaction products. Some runs have also been carried out using the same experimental apparatus, but substituting machine oil for the boron solution. With the system optimized for the use of oil, directed beams of hard x-rays were
observed leaving the luminous region. The x-ray spectra resembled the emissions from heavy elements, possibly those present as contaminants in the oil. The beam directions appeared to be correlated with asymmetrical features of the luminous region.

Further studies, possible models and other theoretical considerations are discussed.

Wingate A. LAMBERTSON

WIN Cells

New Energy News **Vol. 6 (# 1), p. 1 (October 1966)**

Wingate A. Lambertson and His WIN Cells

Win Lambertson, who has a PhD in ceramic engineering, indicates that he and his E-dam (energy-dam) technology, which he has cultivated and developed over the years, are alive and well. Win states that he has been very focused on E-dam circuits over the last 2 years, and has learned a great deal about semi-conductor switching circuits in this time frame.

The development and goal of this invention was to extract energy from the vacuum continuum and began in December, 1972. At that time, Win placed a conical shaped crystal in a DC magnetic field from which energy was extracted via a coil of wire.

He borrowed a precision multimeter for his measurements and promptly fried this multimeter. (Win recalls that he has blown many multimeters over the years.) Work to improve the efficiency of this crystal circuit did not begin until 1976, when it was discovered that removal of the crystal resulted in only a 20 percent reduction of the total energy output. (Win states that the energy could actually be felt physically.)

Win saw no point in continuing crystal studies if it only added 20 percent to the total energy measured. Win then developed a ceramic material to convert the ultra-high frequency energy of the vacuum to a lower frequency energy easily handled by conventional electronic circuits.

Since that time, a metal has been added to the ceramic making it a 'cermet', but the original concept of this material has remained the same, which concept is to collect energy from the vacuum, store it in the cermet, and then release it to a load for utlization. The term E-dam was coined to reflect this concept.

It was originally surmised that the energy for the E-dams was coming from the aether. Later, it was assumed to be coming from neutrinos. This hypothesis was then changed to one in which the 3 degree Kelvin background radiation of the universe was the source.

His current theory is that the energy photons emerging from the vacuum continuum. In other words, Win has come full circle back to his original aether theory as the source for the energy of the E-dams.

The original crystal circuit slowly began to evolve. Initially, the two electromagnets in the original circuit were replaced with two bar magnets and then these bar magnets were eventually eliminated.

The voltages evolved from initially 15 volts DC up to a maximum of 15,000 volts DC. A spark gap was added to develop high current, high voltage spikes. At 15,000 volts, Win began to observe in his garage one summer small, blue electric arcs moving across his work bench surface. These were as much as three feet long.

After that observation, the voltage was reduced because of the danger of sharing his working surface with the high voltage arcs. A resistance was also added to the circuit to slow down the electric charge across the arc. Neighbors from a block away were making snide comments about the noise.

After reviewers charged that the resistor measurements were in error because of phase angle changes, the load was changed to many 100 watt incandescent lamps in parallel, following the example of Dr. T.H. Moray.

Even with 100 lamps in parallel, the lamps would burn out. (100 lamps X 100 Watts each = 10,000 Watts) These lamps were then replaced with 100 ohm wire wound resistors. These resistors too would burn out, but it was difficult to know when they had failed. The next change was to go to industrial eight foot fluorescent lamps which lasted less than a week. His present load is a bank of 400 watt H.I.D. mercury lamps, and these have held up well.

The spark gap switching was abandoned and the change was made to a MOSFET switching system. This has since been upgraded to the use of high current IGBT's. In May of 1994, Win Lambertson presented his results to date on his E-dam circuits at the 2nd ISNE (International Symposium on New Energy) conference. For this symposium, Win had calculated a 965 percent over-unity efficiency.

Later in the summer of 1994, independent testing was conducted by two electrical engineers, Toby Grotz and Robert Emmerich, on a similar circuit utilizing solid state switching and E-dams, which were made to Win Lambertson's specifications.

This testing resulted in the identification of an anomaly in the test setup, which anomaly was unassociated with the E-dams.

Subsequent studies by Toby Grotz into 1995 of other circuit variables yielded a better understanding of the anomaly. Later, in 1996, Toby Grotz applied for an SBIR (Small Business Innovation Research) grant from the DOE (Department of Energy) to further research and develop a product based on this anomalous phenomena.

At the start of 1994 and before the 2nd ISNE conference, Win was using MOSFETs to switch voltages less than 500 volts in his E-dam circuits. Today, with the assistance of Walter Rosenthal, Win has changed over to IGBTs which can switch at voltages up to 1700 volts DC and with currents above 30 amperes.

Win states that he expects to sell his invention later this year and begin working on the history of the WIN (World into Neutrinos) process around which this invention is based.

Notes from Jerry Decker (KeelyNet)

I had the good fortune to attend the 2nd ISNE conference and meet Dr. Lambertson. He hosted a workshop where he passed around a sample of the cells. I examined it closely, it looked like a thin Oreo cookie with one wire attached to each outside cermet and a very thin rubbery material between the two cermets that looked like RTV silicone.

I speculated to Dr. Lambertson that it could be that he used ground up quartz or other crystals mixed with the RTV and secreted between the two cermet discs. Thus by shock exciting the cermets, a combined piezoelectric discharge might yield more energy than it took to produce the shock. Dr. Lamberson said he'd rather not discuss this as he was in process of filing a patent.

Also at the conference it was discussed how the 100 watt tungsten filament light bulbs he'd been using kept blowing out and his wife was upset because he kept using them up. The cause was believed to be the crystal nature of the tungsten metal which would fracture and break the filament under the impress of the high energy discharges being extracted from the aether.

Many of these cells were stacked into columns to increase the overall power output. The excess energy would come from the coupling of high intensity, short duration electrical discharges with the ambient aether/zpe field.

He was a very nice fellow and shared more information about his discovery than most inventors do, however it is now 2001 and below is an article from the Space Energy Association newsletter on September 2000 that you might find of additional interest.

Letter from Dr. Wingate Lamberson

August 9th, 2000
To: Friends of WIN energy
From: Win Lambertson
Subject: Load Study

Introduction

In my May, 2000 Progress Report I told how I came to understand the lack of certification of my method. The problem lay in the electrical measurements that were unable to measure radiant

energy output when no current was moving through the tank circuit. The solution seemed simple enough. I would substitute a non-inductive resistance for the lamp load.

Load Description

For the past eight years my load has consisted of 400-watt H.I.D. mercury lamps. I started with four in series and gradually dropped down to one. The major problem that this load has given me has been its change in resistance with power input. Figure 1 shows a plot of ohms resistance versus watts.

The hypothesis of my method is that zero-point energy, ZPE, is collected through the acceleration of an electron charge. The highest rate of acceleration is achieved with the lowest resistance.

In a normal series of experiments I would collect data at 0.5, 1.0 and 1.5 DC amperes input. My highest yields were always found using the lowest current. If the current were much lower than 0.5 amperes the arc would quench and terminate the experiment.

The method utilizes a pulsating DC current that shows up as an alternating current on a digital multimeter. It shows up on the oscilloscope as a series of square waves. This results from the IGBT switching system that operates in either the fully closed or fully open position.

Electrons are knocked out of the mercury vapor atoms to form ions and the electrons fall back into the ions to form atoms when the switch opens. Falling back into their orbital results in the emission of light photons that are measured using 12 photocells mounted around the outside of the lamp in a light box.

Energy is collected from the vacuum on the electrical charge as it moves through a collector called an 'E-dam' after the hydro-electric dam analogy. It was evident that more light came from the lamp in an alternating current than in a direct current.

Therefore, it was possible to calibrate the photocells using a direct current. In the most recent certification attempt, a low resistance E-dam was used and it was found that the lamp was collecting ZPE without any contribution from the E-dam. This action was confirmed in an independent study by Toby Grotz. He estimated that the total gas discharge ballast market of 275 million units per year could be replaced and cut the power consumption in half.

My goal is to utilize vacuum energy in all energy applications, not just in lighting, so I had to study energy collection in a different type load. A non-inductive resistance load seemed to be a simple substitute. Energy is lost as heat and heat is generated only when the charge is moving through the load.

Radio Shack 8 ohm, 20-watt non-inductive resistors were used to make up the load. These were mounted in eight sets of three in parallel. The total array had a resistance of 24 ohms with a 480 watt capability. The resistance versus power input curve is shown in Figure 2 (not shown on my source material).

A total of eight thermistors were mounted in series on the resistor surfaces with one on each cell. These are calibrated using a DC current, allowing enough time for the surface temperature to stabilize. Instead of photocells measuring light photons, varistor temperature is utilized and measured as resistance to indicate energy being lost to the garage air.

E-dam Design

It was clear from my lamp studies that I had to go up in E-dam resistance in order to collect energy from the vacuum. A new design was developed based on a pyramid shaped crystal as shown in Figure 3. This goes back to some early information collected in 1973. The crystal shown was an attempt to start with a 1/4" base, optimize it and then go up in size and number of crystals to increase the power collected.

Details of the overall E-dam must be withheld in this paper in order to maximize the number of possible claims in the patent application. It is important for the reader to realize that even though the basic concept may remain the same; each final design will be different and will probably change over the years as our knowledge of materials is enhanced.

To my surprise, the change in loads did not work out as expected. The first yield was 85 percent, which of course, is impossible. This meant that some of the energy input was going through the load without doing any work. Adjusting the circuit brought it up to 116 percent before I stopped my bench work to write this paper. The next few days are needed to prepare for making a videotape of the method.

Marketing Plan

Individuals interested in marketing my method have requested a videotape and certification of my method before getting into a sales negotiation. My time availability has made it necessary to do the videotape as the next step. Our son, Larry, will be here over August 14th to 19th and do the videotaping for us. All funding finders should request a copy of the videotape as soon as they need it.

Anyone who needs a certification immediately should feel free to send in his own certifier at his expense with one-week notice for scheduling. Otherwise, I will schedule my own certifier as soon as I feel that I have had enough time to optimize my circuit.

Wingate A. Lambertson, Ph.D.
August 9, 2000

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thin Oreo cookie with one wire attached to each outside cermet and a very thin rubbery material between the two cermets that looked like RTV silicone.

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http://www.xontek.com/Advanced_Technology/Alternative_Energy/Cold_Fusion/Science_of_Free_Energy-part_3_of_3.shtml

THE CERMET OF WINGATE LAMBERTSON

In Florida, Wingate Lambertson, Ph.D., lights a row of lamps in his garage using what he says is electricity taken from the energy of space. It took years for Lambertson, a former director of Kentucky's Science and Technology Commission, to overcome his academic skepticism about claims that you could get something for nothing yet energy freely available from space could be tapped for useful work.

After getting his doctorate from Rutgers University, Lambertson works for United States Steel in Chicago before going into the United States Navy. After going back to Rutgers for more postgraduate work, he joined Argonne National Laboratory, where he worked on nuclear fuel technology.

Then Lambertson discovered the large body of space-energy literature that has been written by researchers in the field. Eventually, he came to believe that something similar to an nether - the basic stuff Of the universe discussed in Chapter Could exist, and that where collected, it could be used to make electricity.

After more than two decades of research and experimentation, Lambertson is certain that space energy can be turned into a practical power source through a process he calls World Into

Neutrinos (WIN). He envisions it being engineered into units that will probably be set outside the home on a small concrete pad, like central air conditioning units are now, and wired into the home's master electric switchbox. The price? About $3,000 for either sale or lease cheaper than buying or leasing a car.

The WIN Process and Cermet

The most important part of the WIN process is Lambertson's E-dam, and the most interesting component in the E-dam is cermet. Cermet is a heat-resistant ceramic-and-metal composite invented in 1948 and considered by NASA for rocket nozzles and jet-engine turbine blades. Lambertson, who spent almost his entire career working with advanced ceramics, is experimenting to develop the best cermet for his device. The E-dam contains a plate of cermet formed into a round spacer about three inches in diameter, sandwic hed between metal plates of the same size.

The process starts with an electrical charge basically, a stream of electrons from a standard power supply. The charge flows into the E-dam, where it is held in the cermet: "It stores electrons like a [regular] dam stores water," Lambertson says. When the dam is opened, the electrons are released. As they accelerate, the falling electrons gain energy from the space energy that is present in the E-dam. This gain in energy is what allows the device to put out more power than it takes in.

The current of electrons then flows into the device to be powered, such as a lamp, and then moves into another E-dam for recycling. Lambertson says there is no way for the process to become dangerous - if too much power were generated, the E-dams would overheat, shutting down the system.

For years, Lambertson was more interested in proving that the process gained energy than in the actual amount of energy gained, since he thought scaling up the process to higher efficiencies would be a relatively simple engineering problem. When his first of three patent applications was rejected, he saw it as a blessing because it forced him to study the space-energy literature more carefully. By the fall of 1994, he had improved the process to the point where it put out twice as much energy as it started with.

Lambertson Finds Help

Meanwhile, Lamberston was having a frustrating time in trying to find funding and marketing help. Responses to his proposals usually fell into one of two categories:

"This will not work, your calculations are in error."

"You get it working and free of all technical problems, and we will take it off your hands."

He learned, as have other inventors in this book, that it's a waste of time to try to convince people of the validity of one's claims when those people don't want to listen. But he did find support in

1987, when he spoke at a new-energy conference in Germany. There, he found people who saw the need for his invention and agreed to market it when the WIN process is perfected.

Lambertson says that he now has active associates in Switzerland, in addition to interest shown by the United States Navy. Three different groups have shown interest in taking over and developing the WIN method.

Wingate A. Lambertson, Ph.D. believes you can power your home on space energy. Lambertson, an inventor from Florida, has developed a device he believes will tap the energy freely available in space. After earning his doctorate from Rutgers University, Lambertson went to work for US Steel before enlisting in the Navy, where he taught explosive ordnance. After going back to Rutgers for post-graduate work he joined the Argonne National Laboratory to work on nuclear fuel technology.

Once the public learns... it will be like taking the genie out of the bottle.

Lambertson, the former director of Kentucky's Science and Technology Commission, admits that he was skeptical about space energy and that it took time for him to overcome that skepticism. He now believes, however, that space energy is real and that it can be tapped for useful purposes. He describes zero-point energy this way: "Zero-Point Energy is energy from the vacuum continuum and is responsible for gravity, inertia, the Lamb Shift and the Casimir force (1,2). It is essentially inexhaustible and has no polluting byproducts." (3)

Lambertson has been working working for over two decades on an energy collecting process he calls "World Into Neutrinos (WIN)" when he thought that neutrinos were his source. He went through three other concepts before arriving at his present acceptance of ZPE as his source. In his method, energy is collected in a device consisting of a Cermet (ceramic metal) positioned between two metal plates and called an "E-dam" after the analogy to a hydroelectric dam. A charge of electrons is cycled between the E-dam to collect the energy and a lamp load to discharge the energy. Charge acceleration results in the addition of kinetic energy from the vacuum to the charge of electrons. The research apparatus used is all solid state and has no moving parts. Cermet, Lambertson believes, is the key to the device. Lambertson begins the process by supplying an initial charge to the E-Dam where he claims that the charge is held in the Cermet: "It stores electrons like a [regular] dam stores water," Lambertson says (4). When the dam is opened, Lambertson believes that the electrons gain energy from the background zero-point energy present in the dam and that this gain in energy can be made dramatic enough to power a modern home.

Patrick G. Bailey, in a publication for the International Forum on New Science, describes the WIN device: "[Lambertson] places a semiconductor ceramic barrier with a parallel capacitance between an oscillating tank circuit and a power supply. He has included test results that indicate a power input of 84 Watt-sec producing an output of 810 Watt-sec, for an over-unity ratio of 9.6." (5) The Institute for New Energy has also tested Lambertson's WIN device, though apparently without significant result so far (6).

Lambertson and his device have not met with widespread acceptance. In his preliminary solicitation to three energy companies and nine large energy users, he received responses from only four and all were negative. He concluded that any development of his method would have to come from entrepreneurs and venture capitalists. The U.S. Navy has shown an interest, but he requires a working model before they will consider it further.

The problem, which Lambertson has had to solve, was stabilization of his E-dams that have changed between the time of his apparent energy gain and the time in which a certifier has made measurements. It took him three years to understand the chemistry of the change which was going due to the electrical charge passing through his cermet. He has had to redesign his basic composition and the cermet structure several to achieve his present design.

The best results that Lambertson has had, thus far, is a yield of 175%. He is presently making a study of simplification of his method to one E-dam and one lamp load, and he plans to build several revised models for evaluation by interested venture capital sources. He has identified at least three venture capital sources ready to invest in the new energy field of zero-point energy collection.

Lambertson is currently working on the right combination of ceramic and metal for the E-Dam to boost the performance level of his device; stating much remains to be done. He is confident that he can perfect the process and foresees a time in the future when a modern home can be powered on energy drawn freely from the zero-point energy he and others believe to be all around us in space. "Once the general public learns that it can take control over its own energy supply," Lambertson says, "it will be like taking the genie out of the bottle."

"Miracle in the Void: The New Energy Revolution"

Dr. Brian O'Leary & Stephen Kaplan

A pioneering solid-state technology is Wingate Lambertson's World into Neutrinos (WIN) process. Dr. Lambertson has conducted materials research and development for such organizations as U.S. Steel, the Universities of Toledo and Rutgers, Argonne National Laboratory, the Carborundum Company and Spindletop. He has been doing independent research over the past two decades on a a solid state device which he believes can provide a practical source of power through the harnessing of zero-point energy.3

Lamberton's "electron dam" (E-dam) is made out of Cermet, a highly advanced heat-resistant ceramic and metal composite. An accelerated electrical charge sends a stream of electrons into the E-dam, and the electrons become stored much like a conventional dam stores water. When the electrons are released, they gain energy from the zero-point energy present in the E-dam. After they flow into the unit to be powered, they move into another E-dam for recycling.

Lambertson changed his cermet chemistry and E-dam design when he learned that an unexpected chemical reaction was taking place. A different combination of materials and composite design

appears to stabilize the process, and a yield of 145 percent was achieved in tests conducted in 1998. Since that time an induction effect has become a major problem which severely inhibits charge acceleration and yield. The present direction of his research is towards reducing induction in his E-dam using two different complementary approaches. It appears that these approaches will solve his remaining major problem. His highest yield using these approaches in June 1999 was 109 percent. Lambertson is confident that he will achieve higher yields with further experimentation, probably as high as 200 per cent, the level needed for commercial viability. He is currently exploring future production with interested manufacturers. Lambertson has a strong interest in providing new solutions for the energy needs of developing nations.

Highly regarded Canadian inventor John Hutchinson has developed a solid state "crystal energy converter" made out of very common materials which is an electrical power source he claims behaves like a battery and never runs down. This small, self-running power source, which typically puts out DC power amounting to one or two volts, has produced up to six watts of power, and he believes it could be engineered to replace batteries and other power needs.

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http://changingpower.net/articles/zero-point-energy-came-through-for-win-l/
July 17, 2010

Zero-point energy' came through for Win L.

by
Jeane Manning

I asked a member of Win Lambertson's support group – his friend John B. who received weekly reports year after year about the zero-point energy project — if he believed that Dr. Lambertson ever succeeded in getting an energy gain of "over unity" with what he called his E-dams. (Over unity is an expression meaning that energy output is more than the measurable energy input, and would mean that the electronic device was tapping into a previously-unrecognized source of energy.) John wrote me today that he found the report that documents the answer to my question. John quoted from it:

"E-DAM CONSTRUCTION AND CERTIFICATION by Wingate A. Lambertson, PhD September, 2004. Abstract Details are described of the E-Dam used in the WIN Method for zero-point energy collection. My certifier, known as John-2, has measured a yield of 153 percent on a recent E-dam. It should be possible to increase this substantially in the expansion of my research by others."

John (whom Win referred to as John-1) reports that the rest of the report contained technical detail, including what instruments were used to measure the output, and a copy of the instrument reading.

He noted that "John-2" worked for the Navy and used their test equipment for his certification.

So yes, Win Lambertson was successful obtaining an energy gain of over unity, John reports. He thinks that Win might have had such a success a number of times. “Seems like he was continually frustrated by failures of the jury-rigged equipment he was using, including his measuring equipment, but I never heard him say ‘quit.’ When we started in 1972 or 73, he told me he would have the program wound up in about 6 months.” Instead he worked on it until he and his wife moved back to Kentucky in 2009.

“I think if he could have brought his garage with him he would have been building new E-dams and running tests the day he died. He never ran out of new ideas for improvements.”

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http://changingpower.net/articles/remembering-energy-inventor-dr-lambertson/
July 13, 2010

Remembering energy inventor Dr. Lambertson

by

Jeane Manning

At the end of July my next bimonthly column – this time honoring Dr. Wingate Lambertson — will be published in Atlantis Rising magazine. He died recently, mere weeks before his 90th birthday. His wife Eileen passed on earlier this year. They had chosen Florida for most of their retirement years, so his final month was also shadowed by news of oil drifting toward familiar beaches.

Seeing the possibility of a new energy source, Dr. Lambertson had wanted to bring clean energy and jobs to replace coal mining in his home state of Kentucky.

But he didn’t ever get the funding that could have hired a team of specialists to help him refine and further develop his solid-state “zero-point energy” converter. (He named the method — which was based on acceleration of electron charges — the World into Neutrinos (WIN) process.) At the end of this lifetime he had a dream telling him that in the year 2018 his process would finally be ready for use by the world. Before his daughter told me about that dream, I wondered why I decided to write my Report from the Front column about an invention whose inventor didn’t live to see it vindicated.

Then I received confidential information from another scientist, whose very recent small-scale but precise experiments, done in collaboration with a colleague, “prove that a ‘field’ exists in space which can do work on a mechanical system to increase its kinetic energy when acceleration is present.”

The cautious experimenter speculated: "Possibly, this field is a consequence of the ether Einstein alluded to in 1920." (A patent is pending on the device used in this new experiment, so no more will be said about it at this time.)

Coincidentally, acceleration (in Dr. Lambertson's case it was acceleration of electron charges) was the vital part of both experiments, including the un-named device tested this month. Acceleration was the factor that Win Lambertson believed enabled his WIN system to tap into the background energy of space and therefore added excess energy to the output of his system.

He wasn't a stereotypical garage inventor. Instead, he was a former executive director of Kentucky's Science and Technology Commission who overcome his academic skepticism about extraordinary claims that energy freely available from space could be tapped for useful work.

Following are excerpts from what his daughter wrote:

Wingate Augustus Lambertson, Ph.D., 89, of Lexington, Kentucky, departed this earth on May 10, 2010 at St. Joseph Hospital.

Mr. Lambertson attended Rutgers University where he received his masters and Ph.D. in Ceramic Engineering. While at Rutgers, he invented a ceramic coating for boiler-furnace refractories for use by the Navy. This invention proved to add substantially to boiler life for the Navy fleet and was very important to the sea-keeping ability of the fleet.

Dr. Lambertson left Rutgers to work in Chicago at the Argonne National Laboratories. While there, he worked on refractory problem involved in atomic energy. He then went to Toledo, Ohio, to teach at Toledo University. Next he went to Grand Island, NY to work at Carborundum. In 1963 he moved his family to Lexington, KY to work at Spindletop Research where he once again was doing research.

He retired to Florida in 1980 where he could devote all his time to his energy research, specifically Zero Point Energy, ZPE. He was a dreamer beyond his time and very late in life still believed that there is a very viable energy source out there and believed that it will come to fruition in 2018. He continued reading and writing right up to the end of his very active life.

A memorial was held on Thursday, May 13, 2010 in Lexington, KY and his ashes are buried next to his beloved wife of 63 years who passed away on January 25, 2010.

The following is adapted from my earlier book, *The Coming Energy Revolution* (Avery Publishing Group, 1996, now out of print):

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(Keep in mind, that chapter excerpt was written in 1994-5.)

Giampaolo MACCANTI

Electromagnetic Device

WO 9840960
ELECTROMAGNETIC DEVICE

Giampaolo Maccanti
Energia Celeste S.R.L.
17 Seprember 1998

Abstract --- Electromagnetic device (100), particularly to be used as a generator, for example of mechanical energy, comprising means (105) for generating a magnetic field, at least one electric conductor (110, 115) arranged inside said magnetic field, means (120) for generating at least one sequence of electric pulses having amplitutes variable in time, said means for generating pulses (120) being connected to the electric conductors (110, 115) for applying a corresponding pulse sequence to each electric conductor (110, 115).

The present invention relates to an electromagnetic device, and particularly to an electromagnetic device suitable to be used as a generator, for example of mechanical energy or heat.

A generator is in general a machine for transforming energy of a type into energy of a different type; generators are also commonly indicated with the improper expression of devices for producing energy, which always implicates a tranformation or a conversion of energy into different form.

Known generators, which differ because of the nature of the used energy, because of the nature of the produced energy and in the way they work, have several drawbacks. Most of traditional generators, such as thermoelectric generators (which generate electric energy exploiting thermic energy produced by a fuel) or nuclear generators (which generate electric energy exploiting the energy released by fission of nuclear fuels), need to be fed with a source of energy (such as oil, gas, coal, uranium) available in nature in scarce quantity and therefore expensive. Moreover, the energy conversion process used in these generators produces polluting exhaust or waste which is dangerous and difficult to be disposed.

Several known generators, including generators using clean (not polluting) and renewable (not subject to exhaustion) sources of energy, such as hydroelectric generators (exploiting hydraulic energy, for example from rivers), geothermal generators (exploiting thermal energy of natural steam within the earth), eaolian generators (exploiting energy of wind) and solar generators (exploiting energy sent out by the sun as radiant energy), need complex machineries and equipment. Generally, they are used in plants (power stations) producing energy on an industrial scale; the energy is then delivered to the final users by means of delivery networks (typically electric networks). This process however implies relevant losses of energy during the transfer. In addition, these power stations and related delivery networks involve high construction and management expenses and they often disfigure the landscape.

Generators for personal use, such as motor vehicle internal combustion engines and home heat generators (boilers), use fuels (petrol, diesel fuel or gas) which are expensive and polluting; electric motors (for example motors used in appliances) use on the contrary energy provided by the electric delivery network, with the above mentioned drawbacks, or small batteries (exploiting a chemical reaction) which provide a reduced power, have a short life, and are difficult to dispose once they are flat.

It is an object of the present invention to overcome the above drawbacks. This object is achieved by means of an electromagnetic device as set out in the first claim.

The electromagnetic device of the present invention exploits a practically unlimited source of energy and it is thus very cheap; it produces no harmful waste and therefore it is safe and not polluting.

This electromagnetic device is very easy to manufacture and it employs very cheap components; it is suitable in particular for domestic use, since it is noiseless and small, even if it is not excluded its use for producing energy on an industrial scale.

In addition, the electromagnetic device according to the present invention does not need to be connected to an external electric network and it is therefore particularly practical.

Further features and advantages of the electromagnetic device according to the present invention will appear in the following description of several preferred embodiments of the same, given purely by way of a non-restrictive indication, with reference to the attached drawings where:

- **Fig.1** shows a schematic block diagram of an electromagnetic device according to the present invention;

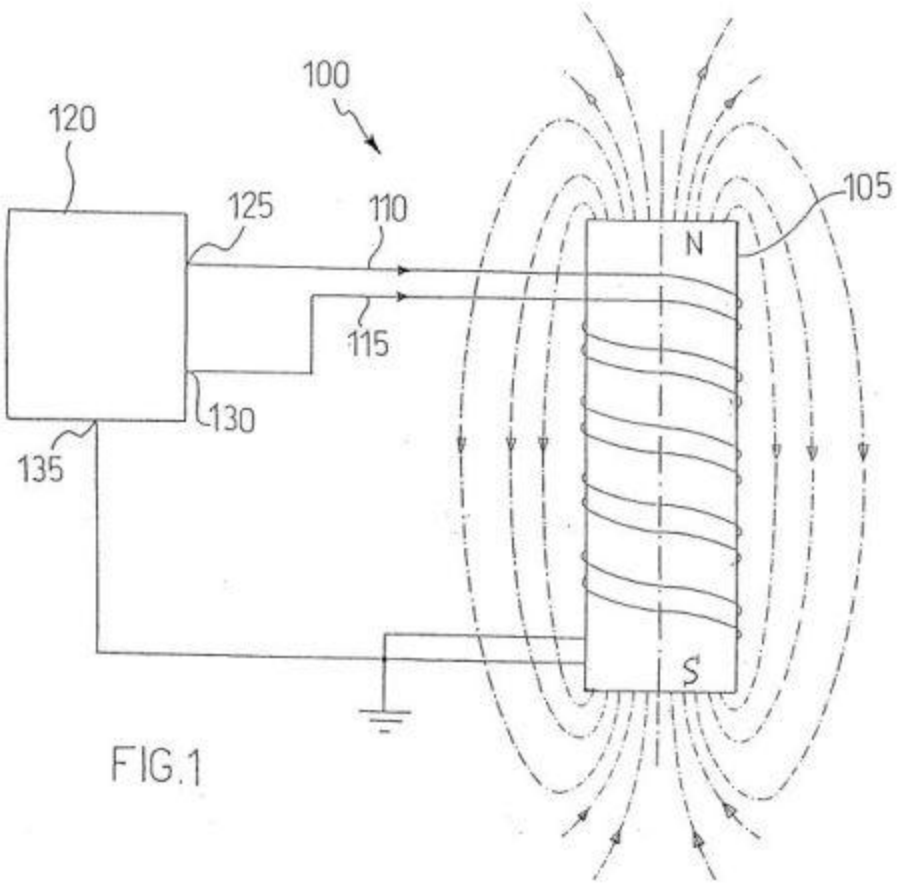


FIG.1

- **Fig.2** depicts time diagrams of the pulse sequences generated in the electromagnetic device of Fig.1;

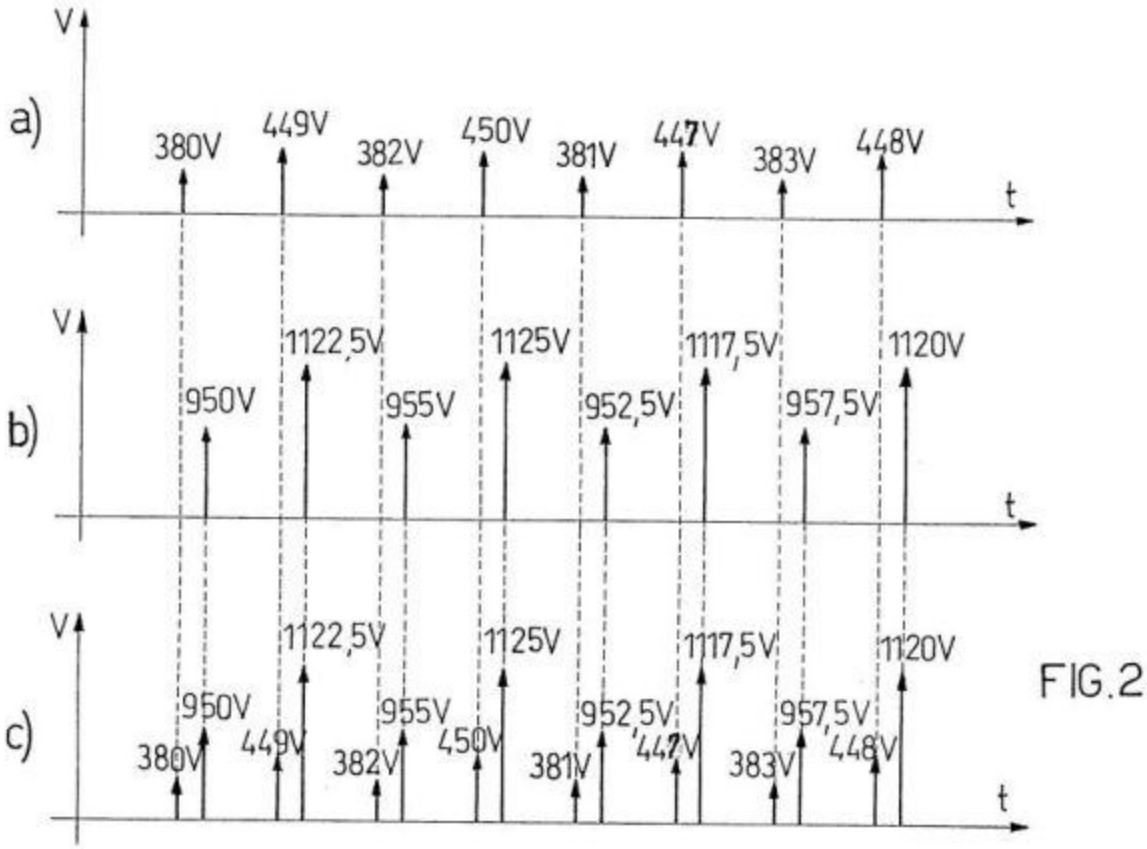
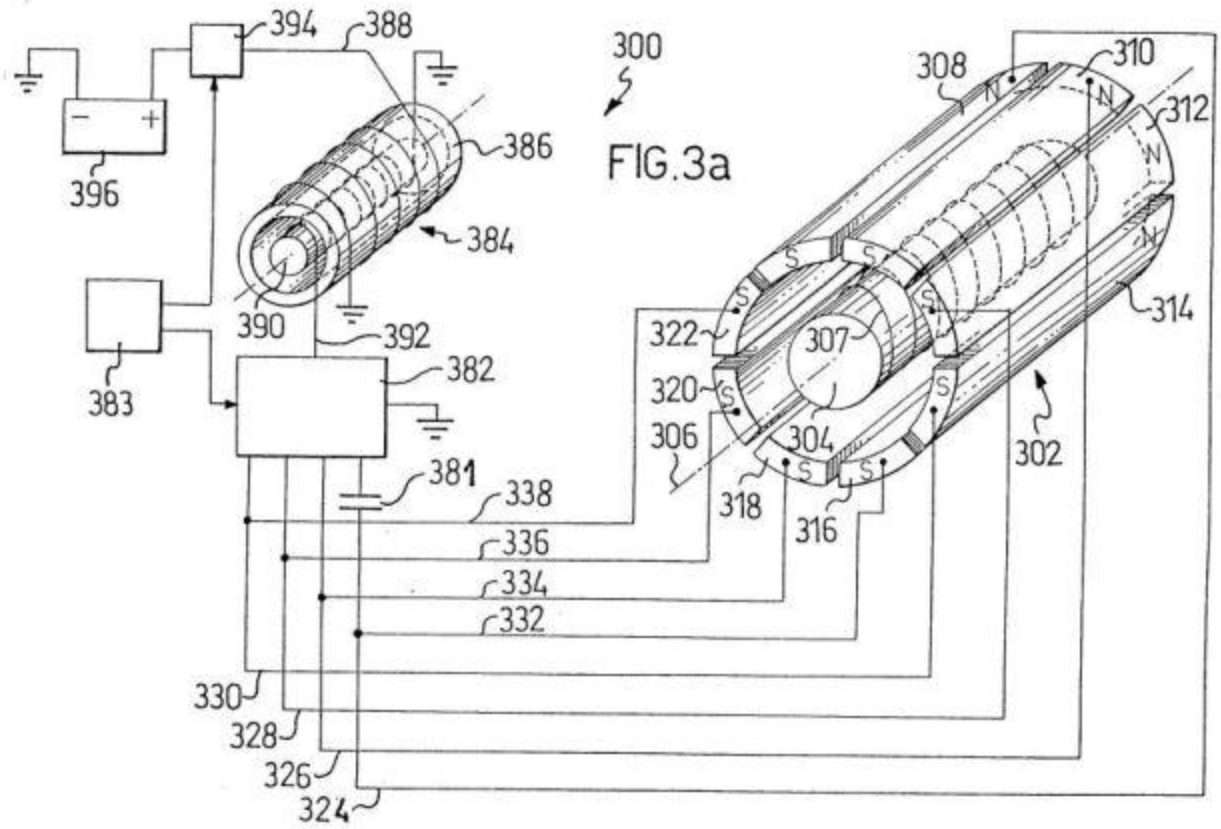


FIG.2

- **Fig.3a** schematically shows a motor embodying the electromagnetic device of the present invention;



- **Fig.3b** is an exploded view of a particular of the motor of Fig.3a

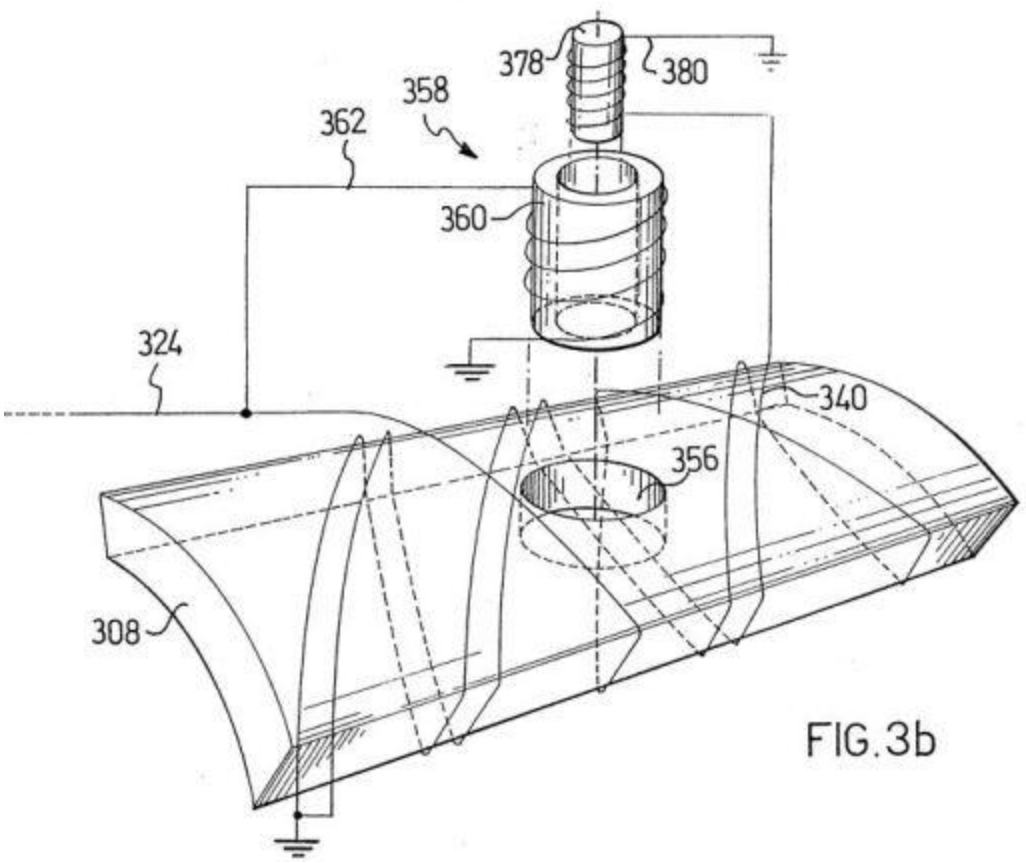


FIG.3b

With reference in particular to Fig.1, an electromagnetic device 100 according to the present invention includes a permanent magnet 105 (made up for example of an iron-cobalt alloy), whose North and South poles are denoted by the letters N and S, respectively. The permanent magnet 105 generates a magnetic field in the surrounding space; this field is schematically depicted by its lines of force which come out from the North pole and enter the South pole. However, the electromagnetic device in this embodiment of the present invention lends itself to be implemented even with an electromagnet or different equivalent means for generating a magnetic field, or even without the magnet 105, for example exploiting the universal magnetic field.

Two electric conductors 110 and 115 are wound around the magnet 105 and they are parallel and arranged in the shape of solenoid, with a number of turns (for example several hundreds) variable according to the application and the structure of the electromagnetic device 100. Alternately, the conductors 110 and 115 are arranged with a different shape and possibly they are not parallel, or they are not wound around the magnet 105 but they are close to the same, in any case in a region where the strength of the magnetic field generated by the magnet 105 is not negligible.

In addition, the electromagnetic device 100 includes a unit 120 for generating electric (voltage or current) pulse sequences, i.e. wave forms where the time during which the electric quantity maintains a high (absolute) value is far shorter. e.g. less than 1/10, than the time during which it maintains a null (or anyway low) value. Particularly, the unit 120 has two output terminals 125

and 130 connected to a terminal of the windings 110 and 115, respectively; a third output terminal 135 is connected to the other terminal of the windings 110 and 115 and is a reference terminal (earth) of the whole device.

In a preferred embodiment of the present invention, the unit 120 generates a first voltage pulse sequence at its output terminals 125 and 135; the time interval (in the following indicated as 'period') between two contiguous pulses (considering negligible their length) is fixed, and has a value related to the application and the structure of the electromagnetic device 100. Tests have been carried out with different fixed values of the period up to a minimum value about 10^{-12}s, but the present invention lends itself to be implemented also with not fixed periods. The voltage pulses generated at the output terminals 125 and 135 have an amplitude (with regard to a reference value of the earth terminal) which takes alternatively a 'low' type value V_L and a high type value V_H, where the difference between the amplitude of a high type pulse and the amplitude of an immediately preceding low type pulse is greater or equal to a predetermined minimum value, preferably 50V.

Advantageously, the amplitude of these voltage pulses changes continuously, and it is preferably random. For example, the amplitude of the voltage pulses takes discrete values spaced from each other by a multiple of 1V in a range of defined values, e.g. from a minimum value of 380V to a maximum value of 450V, as in the sequences depicted in the first time diagram of Fig.2 (denoted with the letter a). The voltage pulse sequence is, in turn, constituted by several pulses of the same type (which means that the amplitude differs less than 50V), alternated to several pulses of the other type, eventually in number which is not fixed in time, for example random (e.g. V_L - V_L - V_H - V_H - V_H - V_L - V_L - V_L - V_H - V_H - ...)

The unit 120 generates in addition a second voltage pulse sequence at its output terminals 130 and 135, with a period equal to the period of the first sequence generated at the output terminals 125 and 135. The voltage pulses of the second sequence are shifted, with respect to the corresponding pulses of the first sequence, of a time interval which is fixed and shorter than this period. However, the present invention lends itself to be implemented with periods of the two pulse sequence which are not equal from each other and with a shifting of different and even not fixed length. The voltage pulses of the second sequence have an amplitude which is multiple of the amplitude of the corresponding pulses of the first sequence; particularly, the amplitude of these voltage pulses takes a 'multiplied low' type value V_{LM} and a 'multiplied high' type value V_{HM} corresponding to a low type pulse V_L and a high type pulse V_H of the first sequence, respectively. Preferably, the amplitude of each pulse of the second sequence is equal to 2.5 times the amplitude of the corresponding pulse of the first sequence, as depicted in the second time diagram of Fig.2 (denoted with the letter b); in alternative embodiments, a different and even not fixed multiplicative factor is used.

The first and second voltage pulse sequences described above are applied to the winding 110 and 115, respectively.

In a alternative embodiment of the present invention, the electromagnetic device 100 has a single winding and a total voltage pulse sequence corresponding to the superimposition of the first and second sequence, as depicted in the third time diagram of Fig.2 (denoted with the letter c), is

applied to its terminals. It should be noted that the use of two different windings is particularly useful when the period of the pulse sequences is very short, since it avoids interference phenomena between consecutive pulses of the first and second sequence. As described in detail above with reference to the pulses of the first and second sequence, the present invention lends to be implemented even with a total pulse sequence different from the depicted sequence.

For example, in alternative embodiments, the different type pulses follow one another in the total sequence in any order, there are only one, two. three or more than four pulse types with different amplitude, the total sequence includes two or more consecutive pulses of one same type, and so on.

Moreover, it should be noted that the electromagnetic device 100 of the present invention lends itself to be implemented even with a single winding 110 and only the described first pulse sequence applied to this winding.

In a different embodiment of the present invention, the electromagnetic device 100 includes several winding pairs (or several single windings as described above), and pulse sequences similar to the ones described above are applied thereto; advantageously, it is possible to increase the period of the pulse sequences applied to the different windings by using several windings, obtaining the same performance of the electromagnetic device 100. These pulse sequence can be arranged in several manners; for example, the pulse sequences are of the same type or different type, they have pulse amplitude values which are equal or different, they have equal or different period, they are phased or shifted between one another, either of a time interval which is multiple of a period or of a different value.

Preferably, as shown in the drawing, the windings 110 and 115 are wound around the magnet 105 in a way that the current flowing therethrough and corresponding to the described voltage pulses generates a magnetic field which is substantially parallel and concordant with the magnetic field generated by the magnet 105, according to the right hand rule; however, the present invention lands itself to be implemented even with a different arrangement of the windings 110, 115.

The pulses applied to the windings 110 and 115 perturb the magnetic field generated by the magnet 105 and produce a total magnetic field having an amplitude which is **extremely higher** than the amplitude of the magnetic field generated by the magnet 105.

Experimental test have shown that the resulting magnetic field has an amplitude far higher **(e.g. several thousands times)** than the field produced by the magnet 105 and that **the energy generated by the electromagnetic device 100 is extremely higher than the energy absorbed by the unit** 120 for generating the pulse sequences.

The electromagnetic device of the present invention is suitable to be used in different applications, for example for producing thermal, electric, mechanical energy, and so on.

An example of motor for transforming the energy provided by the electromagnetic device of the present invention into mechanical energy (particularly kinetic energy) is depicted in Fig.3a. The

motor 300 includes a stationary element (stator) 302 and a moving element (rotor) 304 joined together by means of bearings (which are not shown in the drawing) in a way that the only possible relative movement is a rotation around a common axis 306. A short circuit electric conductor 307 is wound longitudinally in the shape of a spiral on the rotor 304. The stator 302 includes a permanent magnet in the shape of a hollow cylinder with the North (N) and South (S) poles arranged at the longitudinal ends; preferably, the magnet of the stator 302 is split longitudinally into several portions 308-322 (eight in this example) in order to reduce stray currents.

Referring now to Fig.3b (elements in common with Fig.3a are denoted with the same reference numbers) a detailed exploded view of the structure of the magnet 308 is shown (similar considerations apply to the other magnets 310-322).

Grooves (or slots) which accomodate an electric conductor 324 (324-338 in Fig.3a), for example a copper wire with a cross-section of 1mm, are drawn on the surface of the magnet 308; the electric conductor 324 is wound around the magnet 308 in the shape of a spiral spreading out longitudinally in both directions and forming for example a hundred of turns.

Further grooves accomodate another electric conductor 340, insulated from the winding 324; the conductor 340 is likewise wound longitudinally around the magnet 308 in the shape of a spiral forming for example a hundred of turns.

A transversal hollow 356, preferably perpendicular to the common axis 306 and therefore also to the lines of force of the field generated by the magnet 308, is provided in the magnet 308. The hollow 356 accomodates at least one electromagnetic unit 358 including a hollow cylindric stator 360 of ferromagnetic material on which an electric conductor 362 wound longitudunally as a spiral is arranged. A rotor 378 rotationally movable (with regard to the stator 360) around a common axis, is accomodated inside the stator 360; an electric conductor 380, likewise wound in the shape of a spiral, is provided on the rotor 378 and it is connected to the outside by means of wiping contacts, e.g. brushes. The winding 362 (primary winding) defines a number of turns, e.g. 100, smaller than the number defined by the winding 380 (secondary winding), e.g. 250. The secondary winding 380 and the winding 340 are parallel connected, with a terminal in common and the other terminal connected to the earth terminal; the primary winding 362 and the winding 324 are likewise parallel connected, with a terminal in common and the other terminal connected to the earth terminal.

Referring back to Fig.3a, each winding 324-338 is parallel connected to the winding opposite to the axis 306; particularly, the not grounded terminal of the winding 324 (on the magnet 308) is connected to the corresponding terminal of the winding 322 (on the magnet 316), and the winding 326-334, 328-336 and 330-338 are likewise connected. Preferably, a capacitive element 381, typically a capacitor having a capacity smaller than 40nF, is connected in series to a pair of windings, e.g. the pair 324-332, and it is useful to increase the starting couple in load operation. The motor 300 further includes a signal processing electronic unit 382 (e.g. an ORION type processor for power audio signal processing) having a number of output terminals equal to the number of winding pairs 324-338 (four in this example) and a further output terminal connected to the earth terminal; each output terminal of the unit 382 is connected to the not grounded

terminal of a corresponding pair of the windings 324-338. The signal processing unit 382 is operated, by means of control signals, by a logic unit 383, e.g. a DSP (Digital Signal Processing) electronic card, possibly connected to a Personal Computer (PC).

The motor 300 comprises a further electromagnetic unit 384 including a hollow cylindric stator 386 of ferromagnetic material in which an electric conductor 388, wound longitudinally as a spiral, is arranged. A rotor 390 rotationally movable (with regard to the stator 386) around a common axis is accomodated inside the stator 386; an electric conductor 392 likewise wound in the shape of a spiral is provided on the rotor 390 and it is connected to the outside by means of wiping contacts, e.g. brushes. The winding 388 (primary winding) defines a low number of turns, e.g. a hundred, while the winding 392 (secondary winding) defines a high number of turns, e.g. a thousand. A terminal of the secondary winding 392 is connected to the earth terminal, while the other terminal is connected to an input terminal of the unit 382. The primary winding 388 is parallel connected, by means of an electromagnetic switch 394 or any equivalent means (operated by the logic unit 383), to an electric generator 396, e.g. a storage battery which provides a voltage of 12V at its positive (+) and negative (-) terminals and which has an ampere-hour capacity of 1,9Ah.

Particularly, a terminal of the primary winding 388 is connected to the earth terminal, while the other terminal is connected (through the switch 394) to the positive terminal of the electric generator 396; the negative terminal of the electric generator 396 is connected to the earth terminal.

The logic unit 383 periodically switches on the switch 394 for a short time interval in order to apply a base pulse sequence to the primary winding 388. The length of this period is inversely proportional (with the same performance of the motor 300) to the number of winding pairs 324-338 arranged on the stator 302; in this example, the switch 394 is on every 10^{-6}s, for a time interval lasting about 10^{-7}s. The fast variation of the current applied to the primary winding 388 produces a magnetic field with a variable amplitude; the corresponding variations of flux linkage through the secondary winding 392 generates a sequence of multiplied base pulses at the ends of the winding 392, whose amplitude (defining the minimum low type value V_L) is related to the ratio of the number of turns of the windings 392 and 388. This sequence of multiplied base pulses, having a fixed amplitude (e.g. 380V), is provided to the input terminal of the signal processing unit 382. Preferably, at least one further electromagnetic unit (which is not shown in the drawing), similar to the unit 358 described with reference to Fig.3b, or other equivalent means for generating a magnetic field having a direction preferably perpendicular to the axis of the rotor 390, is provided in the stator 386. An induced current having opposite directions corresponding to each leading and trailing edge of the base pulses is generated in the winding 390. The described induced current flows in the winding 390 which is inside the magnetic field created by the further electromagnetic unit; the winding 390 is then subject to a force alternatively rotating clockwise and counterclockwise the rotor 390. Advantageously, with the described structure it is possible to obtain a voltage pulse sequence having a very short period; alternatively, the same pulse sequence is obtained with conventional means.

The signal processing unit 382 (operated by the logic unit 383) changes the amplitude of each received voltage pulse, generating voltage pulses having an amplitude between the input

minimum value and a set maximum value, e.g. 450V (defining the maximum high type value V_H). Particularly, a low type voltage pulse V_L having an amplitude with a random value higher or equal to 380V is provided at a certain moment to a first output terminal connected to the winding pair 324-332; a high type voltage pulse V_H having an amplitude with a random value lower or equal to 450V and at least 50V higher than the amplitude of the preceding pulse is provided at the next period to this terminal, and so on as described above in detail. A similar voltage pulse sequence but with different values is provided to a second output terminal connected to the adjacent winding pair 326-334; this pulse sequence is one period shifted with regard to the one applied to the winding pair 324-332, so that when a low type pulse V_L is on the first output terminal a high type pulse V_H is on the second output terminal, and vice versa. In a similar manner, a pulse sequence, shifted with regard to the one applied to the winding pair 326-334, is provided to a third output terminal connected to the winding pair 328-336 and a pulse sequence, shifted with regard to the preceding one, is provided to a fourth output terminal connected to the winding pair 330-338.

An example of the pulse sequences generated by the signal processing unit is:

1/ 380V 448V 381V 447V 383V 450V 382V ...
2/ 449V 380V 450V 381V 448V 382V 447V ...
3/ 384V 449V 383V 448V 380V 446V 383V ...
4/ 450V 382V 448V 385V 449V 381V 446V ...

As can be seen, the amplitude of the voltage pulses applied in a certain moment to the several winding pairs 324-338 changes spatially likewise the amplitude of the voltage pulses applied to each winding pairs changes in time.

This preferred embodiment (with the low and high type voltage pulses alternated spatially and in time and with an amplitude not less than 380V and random) allows obtaining a regular motion without leaps of the rotor 304. However, the motor 300 lends itself to be operated even with different pulse sequences, and described above.

The pulse sequence applied to each winding 324-338 is applied at the same time also to the primary winding 362 of the corresponding electromagnetic unit 358 (see Fig.3b), and to the similar windings which are not shown in the drawings.

As described with reference to the electromagnetic unit 384, a pulse corresponding to each voltage pulse applied to the primary winding 362 and having an amplitude multiple of the input pulse, according to the ratio of the number of turns of the windings 362 and 380, is generated on the secondary winding 380 with some delay (about 10^{-13}s). In this example, each pulse on the secondary winding 380 has an amplitude equal to 2,5 times the amplitude of the corresponding input pulse. The pulse sequence generated in this way on the secondary winding 380 is applied to the winding 340 and it is slightly shifted, or delayed, with respect to the input pulse sequence (directly applied to the winding 324).

The pulses applied to the windings on the magnets 308-322 produce, as described above, a very high amplitude variation of the magnetic field generating a corresponding variation of flux

linkeage through the winding 307; an induced electromotive force results on the same and it causes a current flow. At the same time, the pulses applied to the winding 362 and the other similar windings produce a magnetic field having a direction perpendicular to the common axis 306. The induced current described above flows in the winding 307 which is inside the magnetic field created by these windings and it is then subject to an electromagnetic force having a direction given by the left hand rule. This force rotates the rotor 304 and the shorter the pulse period is the higher the rotation speed is. It should be appreciated that it is possible to modify readily the rotation direction of the rotor 304 by changing the direction of the current in the windings by means of switches (which are not shown in the drawings). **Test results have shown that a very high shaft horsepower (e.g. 20kW), with an idle speed about 3,000 rpm (revolutions per minute), is obtained by absorbing a negligible power from the electric generator 396 (e.g. 0,07A per 12V, that is 0,84W).**

In a different embodiment, the motor shaft is coupled to an alternator or a direct-current generator (not shown in the drawing) for producing electric energy. Preferably, a very small part of the produced energy is used for recharging the generator 396.

It should be noted that the motor described above lends itself to be constructed in alternative manners, for example by arranging the short circuit winding on the stator and the permanent magnets with the related windings (connected to the signal processing unit by means of wiping brushes) on the rotor, or by using a different number of conductors wound around the permanent magnets (up to a single winding with a single permanent magnet), or by arranging the electromagnetic units inside the mangets on the stator not perpendicularly to the common axis, or by feeding the winding on the rotor with a direct current, or by replacing the same winding with conductive bars joined at their ends by two connecting rings, or by implementing the pulse generation unit with a custom electronic circuit, and so on.

In a preferred embodiment, the motor 300 further includes position sensors (not shown in the drawings) detecting the rotation speed of the rotor 304 (and possibly the one of the rotors 378 and 390 as well). The sensed values are provided to the logic unit 383 which consequently modifies the operation of the motor 300. Particularly, if the rotation speed is higher then a predetermined value, the logic unit 383 increases the period of the pulse sequences, whilst if the speed is lower than the value it reduces this period; when the rotation speed is not regular, the logic unit 383 increases the minimum amplitude value of the voltage pulses.

The motor 300 in operation warms up owing to the energy transformation process; it has benn verified by tests that if the temperature inside the stator 302 raises up to a critical value, about 100^0, the motion of the rotor 304 stops and it starts again as soon as the temperature falls under this critical value. The temperature of the motor 300 increases by going on feeding the same with the voltage pulses described above (even without motion of the rotor 304), so that this feature can be advantageously used when the device is intended to be used as thermal generator. On the contrary, when the device works as a motor it need to be cooled, for example by self ventilation, where cool air is conveyed onto the inner surface of the stator 302 by means of a fan fastened to the motor shaft.

In a preferred embodiment, the motor 300 works in a controlled atmosphere. Particularly, the

stator 302 and the rotor 304 are enclosed in a container (not shown in the drawing) at a pressure lower than the atmospheric pressure, e.g. lower than 100mbar (preferably 70mbar). In this situation, it has been shown that the eat productioon is practically negligible and that the yield of the motor 300 improves considerably.

The structure described above lends itself to be used with simple changes as electric generator as well. It is enough to replace the rotor 304 with a stationary electric conductor (induced conductor), typically wound longitudinally in the shape of a coil, which is then connected to an external load circuit.

Advantageously, in this case the electromagnetic units (358 in Fig.3b) accomodated in the transversal hollows provided in the permanent magnets and the further windings (340 in Fig.3b) arranged around the permanent magnets are not used. In a preferred embodiment, each pulse sequence generated by the signal processing unit (382 in Fig.3a) and applied to a pair of opposite windings (324-338 in Fig.3a), arranged around the permanent magnets, is constituted by one or more pulses of a same type alternated to one or more pulses of a different type, wherein the number of consecutive pulses of the same type is random. In practice, the signal processing unit provides random the different type of generated pulses to its output terminals.

In a manner similar to the one described in the preceding case, the pulse sequences cause a variation of magnetic flux linkage through this coil and an induced electromotive force with a very high power (e.g. some tens kW) results at the ends of the coil itself. Test results have shown that the voltage value at the ends of the induced windings is related to the difference between the amplitude of the low type pulse V_{LH}; for example, a difference of about 60V has been used in order to get 220V voltage. Moreover, it should be noted that the electric generator described above does not wArm up, so that it is preferably used at atmospheric pressure without any cooling system.

A person skilled in the art will of course be able to make many modifications and alterations to the electromagnetic device described above in order to satisfy local and specific requirements, all such changes remaining, however, within the scope of protection of the invention as defined by the following claims.

Peter MARKOVICH

Apparatus To Rectify Ether Energy (ATREE)

General Report # 1
Tesla Technology
Washington Research Center (San Francisco, CA)

In 1899, Nikola Tesla discovered the principle that now serves as the basis for the receiver unit that was first tested by peter Markovich in August of 1977. At this point, let us briefly review what was discovered by Dr. Tesla in July of 1899. If we look at US Patent # 725,605 entitled "System of Signaling", we will find diagrams that described the Tesla system. This system was based on what Dr. Tesla called a wave phenomenon that was not electromagnetic in nature. This wave was able to produce useable electrical energy that was taken from the Earth's atmosphere. This wave as described by Tesla and partially proven by Markovich had a number of unique characteristics. First, the wave train was stationary with a length of about 185,000 miles and a width of about 200 miles. Secondly, it had a frequency of 925 cycles per second. Finally, the wave's speed was equal to or greater than the speed of light.

To understand the instrument and how it is able to generate electrical power, we must divide the unit into three components. These parts are the windings or coils (a primary and secondary units), their shape, and the height and diameter of the capacitor electrode (electron pool). Included in the design of the receiver is the type and composition of the materials used in its construction. To understand the theory behind the device, one must remember that the Earth and its Atmosphere are electromagnetically charged. Further, an instrument that is properly "grounded into this system can be used to receive and transmit useable energy -- a point discovered and noted by Tesla on July 17, 1899 at his Colorado Springs Laboratory.

The Markovich device incorporates the basic principle discovered at Colorado Springs by Dr.Tesla -- namely, that the Earth is a giant condenser The Earth's surface can be seen as one plate and the ionosphere as the other plate through which an electric-like charge is constantly flowing. At present, the Markovich unit can be rated at 2.5 volts and 0.5 (or 0.025) amps. This rating yields approximately 1.25 (or 0.06) watts of power. If the presently loose connections were properly cleaned and soldered, the unit could produce an increased efficiency of about 18% or 1.48 (or 0.07) watts. Moreover, if the system were properly "grounded" by connecting it to another unit of oppositely wound coils, the efficiency could be increased from 30 to 60% or 1.63 (or 0.08) to 2.19 (or 0.10) watts. This rating can also be vastly increased by altering the composition of the materials used to make the device. Here Markovich has confirmed the importance of using materials (metals) of high electrical conductivity such as copper, silver, gold, etc. the ideal material is a metal alloy of copper and silver. This material was employed by Tesla in the transmitter built at Wardenclyffe (Shoreham, Long Island (NY) in the early 1900s.

Thus the immediate goals of the research program on the rediscovered Tesla power system is basically five-fold in nature. First, the wave phenomenon has to be correctly measured and its exact nature discovered. Second, the exact relationship between the energy utilized by the machine and the better known certain types of materials that act as more efficient conductors of this energy must be fully ascertained. Fourth, the effect of the use of this system on the various

organisms that inhabit this planet must be discovered. Finally, the possible interface to the so-called "psychic energy" and any possible relationships must be fully researched.

By adequately learning the nature of the energy that is produced by the Tesla-Markovich energy unit, a general theory of the nature of electromagnetism and energies closely related to them may be possible. In so doing, one may be able to advance the "state of the art" of Man's technology. Moreover, in the long run, the new discoveries may not only solve the energy crisis, but also the "technology crisis" that presently distorts the potential of contemporary civilization.

Presented by: Dr. Peter Markovich
Witnessed by: [10 persons]

Disclosure Document

I, Peter T. Markovich, citizen of Canada, propose to explain the basis for what shall hereafter be known as the "Apparatus to Rectify Ether Energy" (ATREE)

I. Preface ~

Humanity has long been aware of a unique form of energy that appears to be related to the electromagnetic technologies of modern civilization. These energies have been referred to in all ancient civilizations under a number of different names such as chi, prana, mana, etc. In modern times, science has adopted new names for it. These terms, whterher "odic force", "orgone energy" or "bioplasmic effect" are no more than new terms for these ancient energies. In fact, research by modern physics indicates that this energy is related in part to the classic concept of the "ether" -- an energy that would be composed of all known and unknown forms of energy (those energies that occupy the electromagnetic spectrum and allied types). Indeed, it now seems that the new physics as created in the early part of this century has not completely disproven the existence of an "ether" that would "flow" throughout the universe, but has just established the need to determine whether the "ether" fits into a new general theory on the relationships between energy and matter. In this regard, the discovery of an instrument that could convert the "ether" into a more familiar energy form (e.g., electricity) would be a boon to the formulation of any new theory on the relationships of presently known energies to the "ether".

In the spring of 1977, Peter Markovich was able to convert this energy into direct current (DC) electricity by the use of a specially constructed apparatus. Here, an important point must be made, that the instrument in question is not a perpetual motion machine, but simply a machine that is able by the use of a unique induction process to convert an energy of extremely high frequency (teracycles) to one of practically no cycles (DC electricity). Following a series of modifications, the apparatus was able by the fall of 1977 to have raised its voltage from 2.5 volts DC to 36 volts DC and its amperage to 0.7 amps from an initial 0.025 amps. Further developments in the machine's technology had allowed Markovich to progress to instruments in the early part of 1978 that produced wattages in the vicinity of 0.5 kilowatts of DC electricity.

II. Apparatus To Rectify Ether Energy ~

The Apparatus To Rectify Ether Energy (ATREE) is a machine that is able to transform the energy of the ether into direct current (DC) electricity. In order to accomplish this feat, the instrument takes into account the nature of ether. As many scientists now know, the ether consists of a "compressible fluid" that has a density of 10^{127} to 10^{94} wattseconds per cubic centimeter. This high energy density permits a cubic centimeter of ether to be able to provide for the energy needs of a small city. In addition, many scientists have also speculated that the ether may be conducted as a tensor field (motion by compression of the wave) and therefore is a stationary wave. These stationary waves would be able to penetrate and pass through almost all the heavenly bodies known to inhabit the universe. As is the case with radio waves, a particular antenna design would be necessary to efficiently collect and rectify this energy. Since its wavelength is 10^{-32} centimeters and motion of the wave train is quite similar to that of stationary waves, a specially designed hollow ball construction of a highly conductive metal seems most appropriate for this task. In addition, the induction unit could take advantage of the modified "L" (electric) and "H" (magnetic) fields produced by the ether energy to induct a useful electric current.

To convert this energy into electricity, it is essential that a component be provided that can collect and begin the rectification of the ether energy found near the surface of the planet. This part must be able to receive, store and conduct the ether energy to the component of the ATREE that actually rectified the ether into DC electricity. Due to its almost corkscrew motion as well as its high frequency and near electrical properties, ether energy can be collected by a hollow ball whose diameter is approximately one-sixth that of the height of the rectification component. Moreover, the ball should be composed of a very thin (26 gauge or less) metal of high electrical conductivity, such as gold, silver or copper. In our case, a hollow ball composed of copper was employed. In operation, the ether will first collect around the outside of the ball and then easily penetrate the outer surface of the ball and collect in the form of a moving swirl on the inside surface of the ball. To get this pulsating energy to the unit that actually does the rectification, it is necessary to take advantage of the near electrical properties of the ether. At this time, a specially built copper core must be employed. The core of the converter is a copper rod that has the upper 5 % of its length inserted inside the copper collection ball. The top part of this element is needle shaped to permit the swirling ether energy to jump the gap to the tip of the copper core, much in the manner of an electrical spark completing a return to ground through a pointed electrode. This core is tightly wound with 26-gauge copper wire from a point directly beneath the ball down to the opposite end of the copper rod. Also, an outer coil built from insulated #14 household wire is used in the converter. This second coil is attached on one end to the outside of the collection ball and on its opposite end to the working electrical circuit.

The conversion of energy resembles in many ways the electromagnetic induction principle discovered in the 19th century. As noted previously, ether possesses two quasi-electromagnetic vectors. The first of these is the quasi-electric one that seems to carry a charge and to flow like electricity through wires. The second vector is a quasi-magnetism that differs only in the fact that the lines of flux are bent in an inward direction instead of the more well-known outward bend of magnetic flux. To induce electricity, the converter employs an unusual phenomenon related to these vectors. In the case of ether, the swirling energy flows into the rod and also into the tightly

wound inner coil; however, the difference in rate and distance traveled allows the rod's energy to reach the bottom of this component way before that which goes by way of the inner coil. In doing so, the vectors cross and induce an electrical potential in the wires of the inner coil. To amplify this voltage, the outer coil must be wound counter to the winding of the inner coil. Here, the return circuit through this coil acts in the same manner as the secondary induction coil in a transformer.

To summarize the process mentioned above, let us quickly review the entire conversion process. First, the ether jumps to the tip of the converter's core and is conducted toward the opposite end of the rod that is connected to the electrical circuit. Simultaneously, the ether flows through the tightly wound inner coil to the opposite end of the rod. The difference in rate and distance allows the coil and the copper rod to induce an electrical potential that is greater at the bottom of the rod than at its top. Finally, the outer coil wound counter to the inner one acts as an amplifier of the electrical potential and current since its fields (the electrical circuit return to the ball) have the property to amplify the quasi-electricity produced by the induction process in the copper rod and the inner coil. In this fashion, the ATREE is able to convert ether energy into useable DC electricity.

To conclude, we have seen how a specially constructed instrument as first conceived and developed by Peter Markovich in the spring of 1977 has been able to conduct and convert ether into DC electricity. As future developments continue, it holds the promise of giving humanity a possible alternative to fossil and nuclear generation of electrical energy.

Presented by: Peter Markovich
October 1, 1977

Witnessed by: [[8 persons]

General Report
Tesla Technology
Washington Research Center (San Francisco, CA)

On February 8, 1978, a test of the Markovich Electric Power Source (MEPS) was conducted at the home of its inventor, Peter Markovich. Also in attendance for this demonstration was Don Murphy, Art Steele, and Sheldon Nidle. A series of tests were run in order to determine the current rating and closed and open circuit voltages of the MEPS. The first test was to hook the voltmeter in series with the device and then to add a number of resistors to determine the closed circuit voltage of the instrument. Following these tests, the MEPS was to be tested by having it light a 60-watt bulb. Current was to be determined by having the voltmeter connected in parallel to the MEPS and an ammeter connected in series to the electrical circuit of the MEPS. The results are as follows:

Open Circuit 180 Volts DC 3.0 Amps
60 Watt Bulb 150 VDC 2.5 A

10 M-ohm Resistor 150 VDC 0.000015 A
Shunt Motor 150 VDC -----

The results of the tests were quite impressive. The motor was run at a very high speed while the bulb was able to shine very brightly; however, the actual lumens given off was not measured. In addition to the DC current, an AC component was also measured. This phenomenon may be due to the nature of the meter employed as well as to the pulsing nature of the DC electricity that comes from the instrument. The low current that was measured when the 10 megaohm resistor was shorting the MEPS was to be expected since such a high resistance did not lower the amount of voltage measured in the instrument. These tests indicate the fact that the unit is extremely more potent a power source than a battery since the instrument returned to its maximum measurements instantly after being disconnected and being drained for 5 to 10 minute periods.

Witnessed by: [5 persons]

Letter to W. M. Hill

(Canadian Patents & Development Ltd, Ottawa, Canada)

August 31, 1978

Dear Sirs:

As requested during our meeting, I am enclosing a general outline of ongoing research at Markovich Technology Institute in regards to the Markovich Tesla Electrical Power Source, referred to as MTEPS. One of our basic research units was demonstrated at the US Dept. of energy on April 25, 1978.

I have developed my "Magnifying transmitter" based upon the initial research and the basic principle discovered at Colorado Springs, CO by Dr. Nikola tesla. As you are aware, Dr. Tesla received over 2,000 US Patents, developed the basic poly-phase electrical systems used by Westinghouse and Edison, and produced many other basic electrical devices still sued today. That particular research is based upon my improvements on US patent # 725,605 entitled "System of Signalling" by Nikola tesla.

I was first able to prove the Tesla Theory to my satisfaction while aiding in the development of the tracking equipment for the early Sputnik satellites launched by the USSR during 1956. Since this period, I have been able to satisfactorily prove a number of Tesla Theories including an electromagnetic scope and a basic theory to separate hydrogen and oxygen from seawater into conventional fuel.

The Tesla Colorado Experiments and Tesla Theory as well as my own research seem to indicate the possible utilization of cosmic energy rather than fossil fuels, nuclear, etc., in the production of either AC or DC electrical power.

MTEPS is a system based upon a stationary wave phenomenon described by Nikola Tesla that is not electromagnetic in nature. This wave as described by Tesla and partially proven by me has many unique characteristics. First, the wave train is stationary with a length of approximately 125,000 miles and a width of approximately 200 miles. Secondly, it has a frequency of 925 cycles per second. Finally, the wave's speed is equal to or greater than the speed of light at 185,000 miles per second.

Testing and new developments have been in progress for over one year with the following results:

Sept. 28, 1977 ~ Faraday Cage Experiment determined power rating and electrical potential at voltage of 2.5 V exactly; amperage at level of 0.5 A; wattage under ideal conditions at 1.25 W. resulting power source was attached to a series of loads which included a small incandescent light bulb used for flashlights and a 10 ohm resistor. Light remained bright and steady indicating device applicable for common electrical usage.

Nov. 15-16, 1977 ~ Continuation of research with modifications on MTEPS. Results included: Voltage increase from 2.5 V to 25 V; Amperage increased from 0.5 A to 0.6 A with a total increase of approximately 10x in potential and 20x in power. Note: It appears that some form of new energy is being induced to produce a useable DC electrical current.

Nov. 20, 1977 ~ Experiment by Marcel Vogel, Senior Scientist for IBM Research Center, San Jose, CA. Results included: Open circuit voltage of 36 volts; open circuit current of 0.8 amps. When a load of 1,000 ohms was added in a closed circuit, the potential dropped to 20 volts and the closed circuit current remained at 0.8 Amps. When the load was disconnected, the voltage rapidly returned to 36 volts in less than one minute (20 seconds). The oscilloscope verified the steady DC voltage emitted from the MTEPS Unit.

Feb. 8, 1978 ~ Continuation of witnessed experiment. Open circuit resulted in 180 V; current at 3.0 Amps, which lighted a 60 watt bulb. Both an AC and DC current component was measured.

These tests indicate that the MTEPS Unit is extremely potent as a power source.

May & July, 1978 ~ The current working model of the MTEPS Research is producing 360 volts; current at 14 amps; producing AC and DC electrical power capable of running a 5 hp motor to light 6 household light bulbs. This was successfully demonstrated at the US Dept. of Energy.

Based upon these successful experiments in a very short period, I expect that with proper funding, Markovich Technology Institute could produce a vastly improved, high performance MTEPS Unit demonstrating an entirely new energy technology.

The energy ramifications are quite evident. The applications of the MTEPS are unlimited. However, initial consideration should be given to the original Tesla concept of a new type of communications system that would be virtually an unjammable communications method and very effective beyond out solar system.

Additional areas for exploration include:

(1) Deep space magnetic propulsion vehicles;
(2) Heat ray satellites in geostationary orbits to be used for altering climate and weather;
(3) Multi-facility home and recreational energy systems;
(4) Applications relating to wireless electrical power system;
(5) Transmissions from point to point on earth as discovered by Tesla, improved by me.

Thank you for your continued support.

Sincerely,

Dr. Peter T. Markovich

General Report

Tesla Technology
Washington Research Center (San Francisco, CA)
(Nov. 15-16, 1977)

Since our last series of tests a series of modifications of the Tesla-Markovich Power Source have been completed. Among these changes were the following:

(1) Alteration of the capacitor ball by substitution of a larger copper unit and the addition of a needle-shaped mast core that was entwined with 30-gauge copper wire (bare). Also, a series of copper wire prongs attached to the top of the unit with these prongs put through the top of the unit and attached to the inside of the ball.

(2) Alteration of the mast unit by substitution of a much larger unit (OD of 3/4") and the intertwining of the new copper core with 30-gauge wire. In addition, the use of #14 insulated electrical wire wound to the ID of the new brass mast with a winding of #14 bare electrical wire interwound with the insulated #14 wire.

(3) Addition of a solid connection between the secondary and the primary coils by the use of aluminum tape.

(4) Addition of two new coils. One that goes from the mast to the primary tube and one that goes from the mast core to the secondary-primary connection.

When testing was finally begun, a number of unusual phenomena were discovered. Among these were the following:

(1) Voltage was increased in the unit from 2.5 V to 25 V while amperage was increased from0.5 A to 0.6 A --- a total increase of approximately 10x in potential and 20x in power.

(2) The circuit was found to produce current when a number of different connection were attempted --- e.g., mast to ground, ball to secondary, etc. The device only failed to produce current when some connections involving the primary were attempted.

(3) It appears that some form of new energy is being induced to produce a useable DC electrical current.

At the present time, we are in the process of adding more windings to the capacitor unit and the mast. Hopefully, this action will boost the electrical potential to 36 volts.

General Report

Tesla Technology
Washington Research Center (San Francisco, CA)
(November 2, 1977)

After the capacitor ball was altered by covering it with aluminum tape and the insertion of several prongs at various angles to the needle-shaped core of the mast inside the ball, the unit (M-1a) was taken to the home of Marcel Vogel in San Jose, CA. Here, it was set up with two high impedance voltmeters and an oscilloscope to measure any possible effects. In addition, a series of experiments which involved the use of Mr. Vogel's psychic ability to increase and decrease the voltage of the MTEPS were attempted. The results of the experiments were as follows:

(1) The readings of the units were increased as initially predicted: an open voltage of 36 volts and an open circuit current of 0.8 amps.

(2) When a load of 1,000 ohms was added in a closed circuit the potential dropped to 20 volts and the closed circuit current remained at 0.8 amps. When the load was disconnected the voltage rapidly returned to 36 volts in less than one minute (20 seconds).

(3) Marcel Vogel appeared to be able to increase and decrease voltage by about 3 volts. Mr. Vogel reported that the use of a clear quartz crystal left a feeling of coolness in his feet while the use of an amethyst crystal produced a feeling of warmth.

(4) The use of an oscilloscope again verified the steady DC voltage emitted by the unit. However, any attempt at looking for electrostatic fields has to be discounted since the research did not take place in a Faraday cage and the testing equipment was tied to extension cords feeding off standard AC house current.

These tests again proved the ability of the unit to perform as a battery and/or timed capacitor in the DC circuits employed. It also pointed out even more clearly the fact that the unit may be drawing off "life" or "cosmic" energies and acting as a transducer to turn them into useable DC electrical energy. Our next experiments will involve the use of a large Tesla air induction coil interphased with the MTEPS in order to test the wireless power transmission theories of Dr.

Tesla as well as the upgrading of the unit to larger wattages so that the unit can be tested as a main and/or auxiliary power source. In so doing, we feel that it will be possible to eventually use the device as an AC power source.

Respectfully submitted,

Peter T. Markovich
(11-20-1977)

Witnessed by: Sheldon Nidle, Daniel Haley, & Marcel Vogel

Peter T. Markovich & ATREE ~

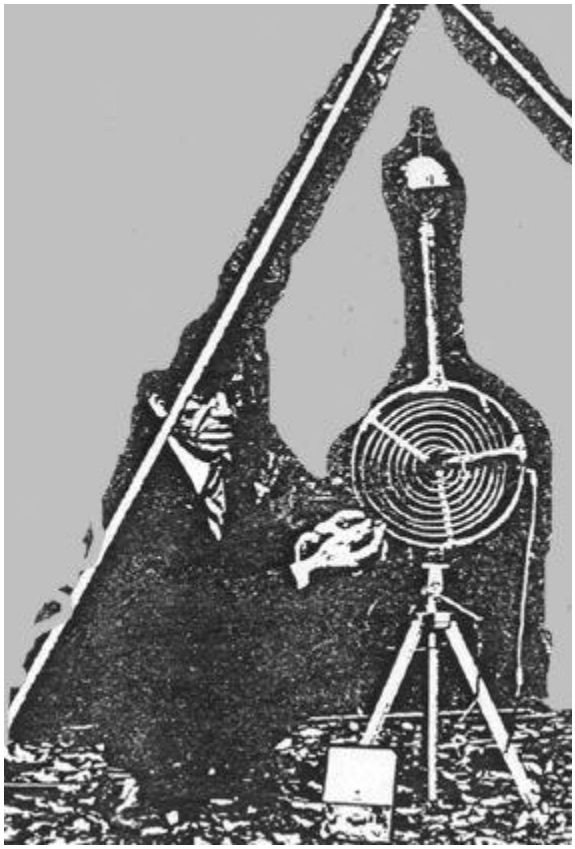


FIG. 1 SPIRALING NATURE OF PARAMAGNETIC WAVE BETWEEN PLANETS

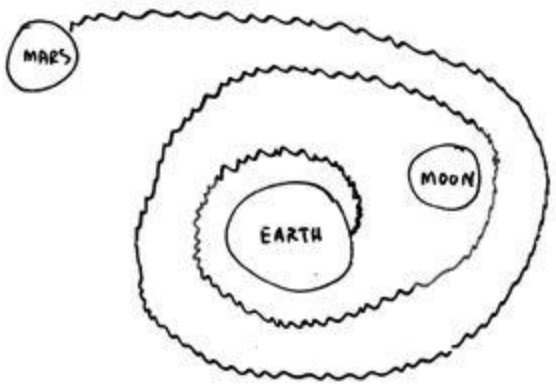
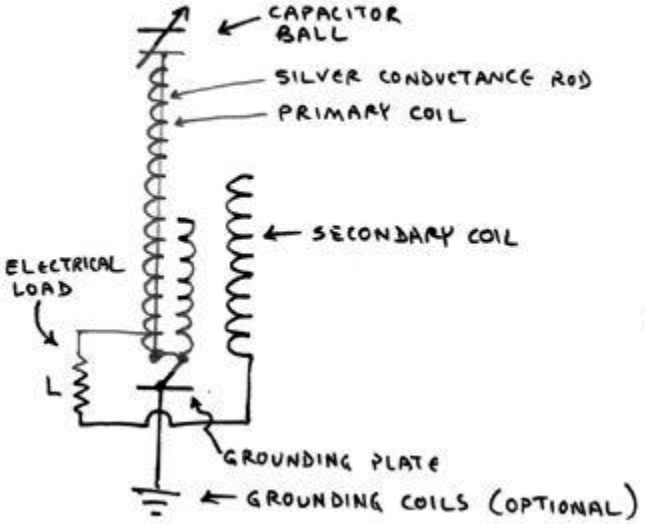
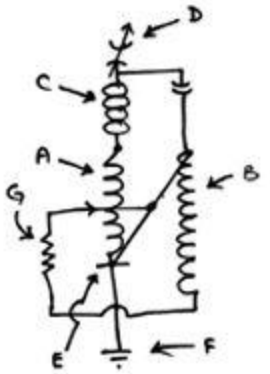


FIG. 2 – CIRCUIT DIAGRAM OF ATREE



Oct 22 '77
V = 2.5 V
A = 0.5 A
Ω = 4.0

FIG 3
CIRCUIT DIAGRAM
OF ATREE



A PRIMARY COIL
B SECONDARY COIL
C MAST COIL & CORE
D CAPACITOR BALL
E GROUNDING BASE PLATE
F GROUNDING OILS
G ELECTRICAL LOAD

FIG 4
CIRCUIT DIAGRAM
OF ATREE

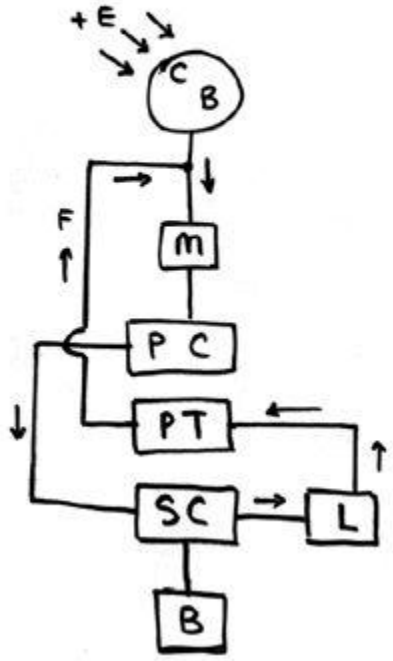
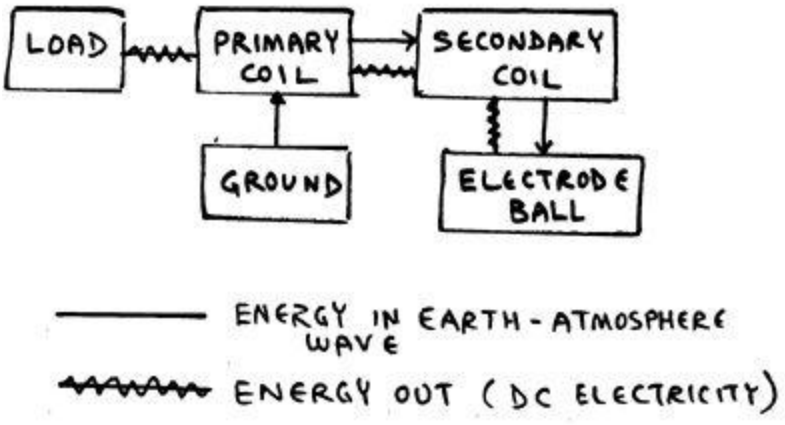
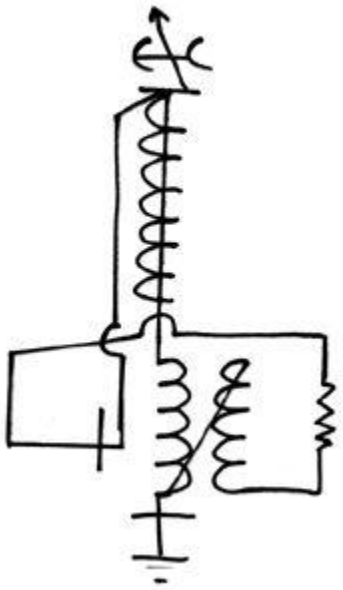


FIG 5.
ATREE



F G 6



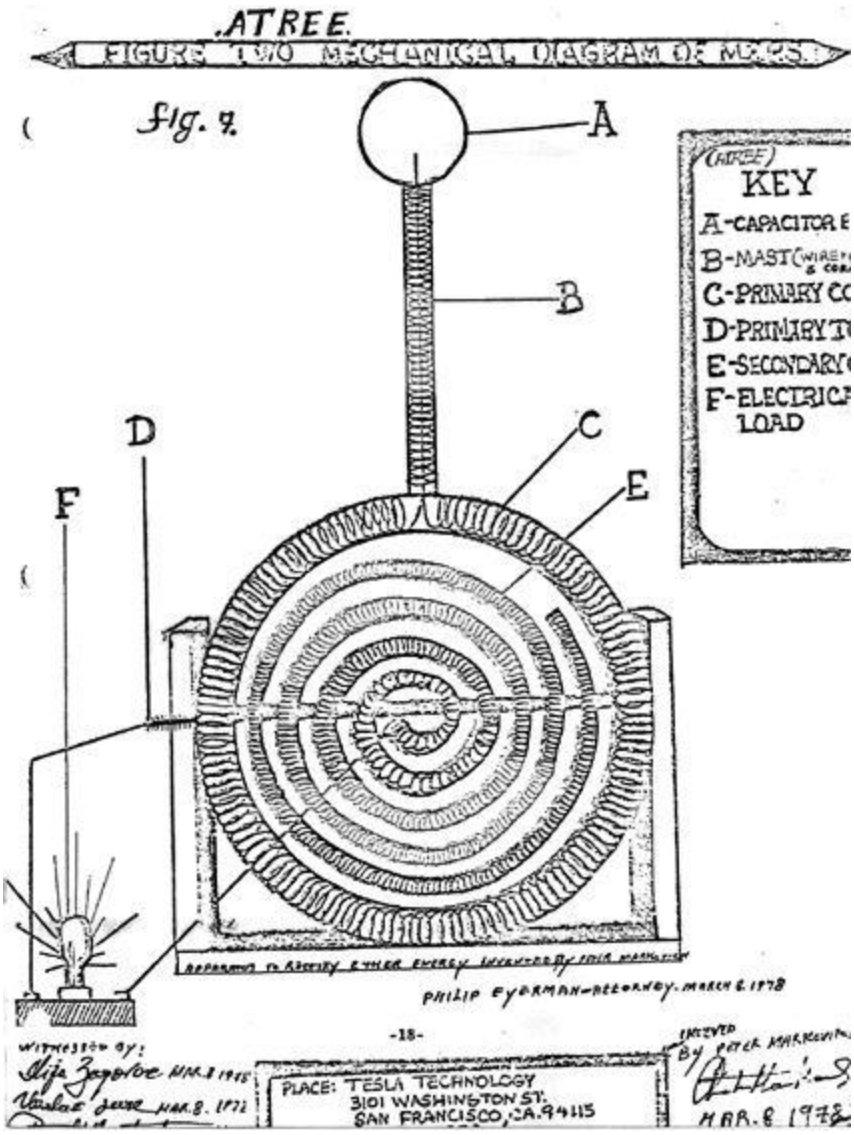

ATREE.
FIGURE TWO MECHANICAL DIAGRAM OF MARS
Fig. 2.
A
B
C
D
E
F
KEY
A-CAPACITOR
B-MAST
C-PRIMARY
D-PRIMARY
E-SECONDARY
F-ELECTRIC
LOAD
PHILIP EYERMAN-RECORDER. MARCH 8. 1978
-18-
WITNESSED BY:
Elija Zaporoc MAR. 8 1978
Vaclav Jerse MAR. 8. 1978
PLACE: TESLA TECHNOLOGY
3101 WASHINGTON ST.
SAN FRANCISCO, CA. 94115
INVENTED BY PETER MARKEVIN
MAR. 8 1978

FIG 8
ATREE

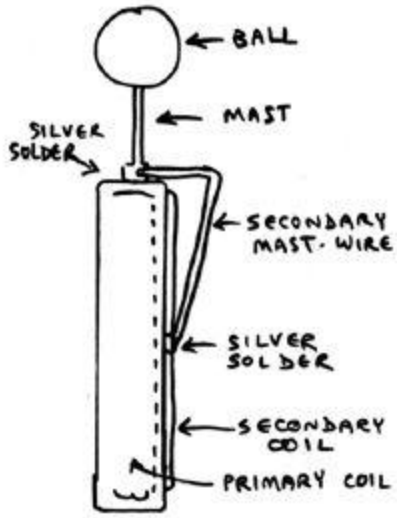
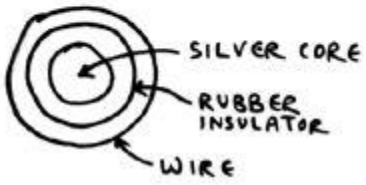


FIG 9
DIAGRAM & WINDING OF COILS



F G. 10
ATREE

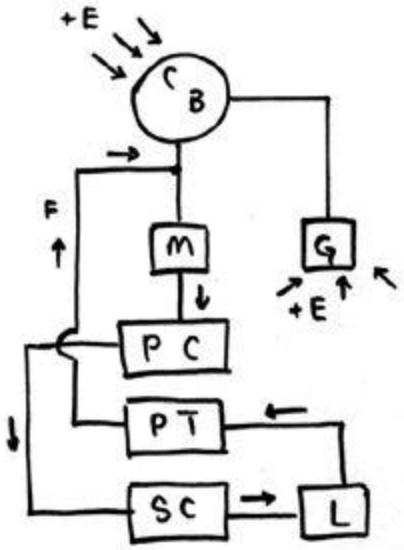
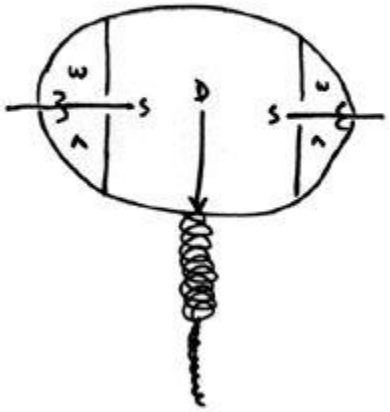


FIG 11
ATREE



Space Energy Receiver

by

Unknown Author

The device in question is one of a number of energy transducers that converts extremely high frequency energy to a form comparable to alternating or direct current electricity. The process involves in all cases, the utilizing of the instrument as a specially designed resonating cavity. This cavity can be composed of either a number of crystals, a series of coils, or a combination of the above. To understand how the unit operates, it is first necessary to briefly describe the nature of this energy source.

Research and experimentation have established that this energy is one that pervades the known universe and is constantly flowing through the Earth itself. It has been found to be quite dense, with enough power to light an American city of around 50,000 persons for a year. Because of its origins and immense power potential, this energy has been called "vacuum," "cosmic," "radiant," or "zero-point" energy. Dr. Nikola Tesla, the discoverer of the electric age, may have used this energy to create his most fantastic invention-the "Magnifying Transmitter."

At the beginning of this century, Tesla was able to send electrical energy through the earth without the use of wires. In a test transmission, he sent electricity to a receiver located twenty six miles away where a bank of 200 fifty watt light bulbs lit for as long as the transmitter operated. This demonstration convinced Tesla that he had learned the principles of operating the Earth as a gigantic resonating cavity. This resonating cavity had the ability to conduct not only electricity, but also radio waves and any other type of electromagnetic wave. However, the key part was the ability of the transmitter to magnify electromagnetic waves. Also, the device had the ability to transmit this energy at a frequency comparable to the Schuman cycle (6 to 13 hertz). This fact indicated that Tesla had stumbled onto a new form of energy directly convertible into electricity. Evidence of this discovery can be seen in two actions taken by Tesla after the success of the Colorado Springs Experiments. In July 1902, he wrote a letter to Robert Underwood Johnson in which there was mentioned a discovery of a new unknown energy that could be used to create "fuel-less motors." At the same time, Tesla was demonstrating these devices to other friends and refusing to apply for U.S. patents.

Recently researchers have discovered a number of interesting facts about Tesla's energy. First the energy traveled through the universe as a spiraling stationary wave or corkscrew. Second the energy can be conducted by electrical instruments (wires, etc.) composed of metals that are also excellent conductors of electricity (gold, silver, copper, etc). Strangely, those conductors that have no known natural magnetic property such as aluminum can not be used to collect these energies, but only to disperse them. Finally the energy in its corkscrew fashion carried itself around the outside of a wire and not through it as was the case with conventional electricity. Hence, it will be necessary to construct motors that are wound slightly differently in order to make the best use of this energy source. However it will be possible to inter-phase this energy into the modern electrical world and gradually "phase in" the new system.

It is one thing to acknowledge the presence of this strange form of energy, but quite another to construct a successful transducer device. To do so a potential inventor must realize that one should design a device that will have a number of interesting properties. First the instrument must be constructed of materials that can collect the energy, i.e., conductive metals such as copper, silver, etc. Second, the unit must be able to gradually step down the energy. This process can be accomplished by a series of tightly wound coils or else a specially faceted quartz crystal

that is connected in series to a number of tightly wound coils. It is the purpose of the first set of spiral coils or of the crystal to act as the source of control for the "electrical energy" in the circuit. The crystal or spiral coil receives this "energy" from a "collector" and converter coils that are attached to it. For the system to operate efficiently, the collector and converter coils must be of a similar shape as the coils that directly surround the crystal or else a harmonic ratio of the crystal and its coils. By putting the energy through enough turns of wire and constructing a properly faceted crystal, one is able to drop the energy to a frequency that can be inter-phased with electrical circuitry. Such a device will only encounter two potential problems. First, there is the great amount of radiant energy that can be given off by an improperly tuned coil. This problem can be overcome by the use of a proper amount of windings and the substitution of materials that are more conductive than those used in previous models. Finally, one must overcome the problem of lower amperages in crystal units. This problem can be solved by the use of a system of specially constructed grounds and the use of smaller crystals in the circuitry between the crystal control system and the collection and conversion system. In this way, improper balances in the device can be overcome in the development of this new system.

As we have seen, there exists a number of ways to successfully convert space energy into electrical energy. This largely unknown energy can be used to perform all the important tasks that can be presently accomplished by electricity. That is, the energy can be utilized as a communications system, power system, or transportation system.

Space Energy Power System

To convert this energy into electricity, it is essential that a component be provided that can both collect and begin the conversion of the energy found near the surface of the planet. This part must be able to receive, store, and conduct the energy to the unit that actually rectifies this energy into dc electricity. Due to its corkscrew motion, high frequency and other near electrical properties, it has been found that this energy can best be collected by a hollow ball whose outside diameter is one sixth of the height of the rectifying unit. Furthermore, this ball should be constructed of a fairly thin conductive metal (#11 gauge sheet metal or less) In our case we chose a ball made of copper (Figure 2) In operation, the energy will first collect around the outside of the ball. This energy will then enter the inside of the ball and collect on the inner surface in a fashion similar to an electrostatic charge. Hence, the ball has received the energy and due to its conductivity and shape stored the energy as a "charge" on its inner plate. To get this energy to the rectifier, it is essential to devise a means to send the collected swirl of energy to the induction rod. This act is accomplished by employing an electrical property of "space energy." The top 5% of the copper rod is formed into a needle shaped tip that permits the energy's "charge" to flow down it like a standard electrostatic charge would by "jumping the gap" to an electrode (tip) in order to complete the fastest possible return to ground. Wound around the "induction rod" is #26 AWG seven stranded hook up wire, the wire is loosely wound over the first six inches of the rod and then tightly wound around the rest of the rod. Finally, the use of #14 AWG household wire is employed in a coil wound in the direction opposite of the coil on the "induction" rod. This coil is affixed on the top to the ball and on the bottom to the working electrical circuit. This entire unit is encase in 1¼ -inch copper tubing.

Conversion of "space energy" resembles in many ways the electromagnetic induction principle first discovered by Henry and Faraday in the last century. As noted previously, this energy has near electromagnetic properties. These properties include the presence of two quasi-vectors, a quasi-electrical (L) field and a quasi-magnetic (H) field. This second or quasi-magnetic field differs from the traditional concept of magnetism by having its flux (lines of force) bend inward instead of magnetism's outward direction. To induce electricity, it is necessary that two dissimilar energy flows be set up. The first is through the copper rod and the second through the coil wound around the rod. Apparently, this difference in distance and speed (wire resistance) off flow creates the conditions similar to the moving of an iron core through a magnetic field, that is, an electrical current is induced. This phenomenon is due to the quasi-magnetism present in both the copper rod and coil (Iron nails will stick to the outer copper tube). Thus, a corollary of the Faraday Law of Electromagnetic induction is clearly found in the induction unit. Further proof of this inductive effect comes from the fact that the counter-coil seems to act much in the manner of the secondary coil of a transformer (amplifies voltage).

Once the energy leaves the induction unit, it enters the "control unit." This unit is composed of a central piezoelectric quartz crystal that is mounted on a tuning (moveable) base attached to the bottom of a hexagonal hardwood resonating chamber. This instrument acts as the split or frequency tuning capacitor. That is, the "control unit" accomplishes the final tuning of the energy so that the maximum amount of energy can be converted into electricity. This circuit begins at the top of the box and passes to a flat spiral coil placed beneath the top of the box. This coil is glued to the copper sheathing that comprises the actual resonating chamber. This "roof coil" starts the process by directing the energy to the crystals upper facets into the working circuit. Next, the energy travels to the inner counter-wound vertical coil called "the crystal coils" through the use of a "slip ring." Here, it is exposed to the energy of the sides or long facets of the crystal. Finally, the energy travels through the main coils, a counter-wound vertical coil glued to the bottom sheathed resonance chamber. By this time, the resonance induced by tuning (turning) the crystal has increased the efficiency of the conversion process. This phenomenon is due to two factors. First, the crystal has the ability to control the amount of voltage in the circuit. This effect is found in standard electrical theory in the use of split capacitors to tune circuits and in this way increase the "Q" efficiency of an induction coil (commonly employed in microwave and radio circuits). Secondly, the unit has the property to increase or decrease the amount of resistance in a given circuit. This was demonstrated by the boxes ability to burn out a 70Vdc, 2 amp step-down transformer. By the use of these properties the control unit is able to transform the energy from the conduction unit into a more stable electrical form.

To sum up let us quickly review the entire conversion process. First, the energy jumps to the tip of the inductor rod and is conducted to the opposite end of the rod. Simultaneously, this energy flows through the tightly wound induction coil. The difference in rate and distance allows the rod and coil to induce an electrical current. Finally, the energy is sent to the control unit to stabilize the converted energy. The main working circuit for the system consists of a primary tube (core and coil assembly labeled C and D in diagram 2) and the secondary spiral tube (core and coil assembly labeled E in diagram 2) In this fashion the device is able to covert "space energy" into a useable form of DC electricity.

FIG. 2

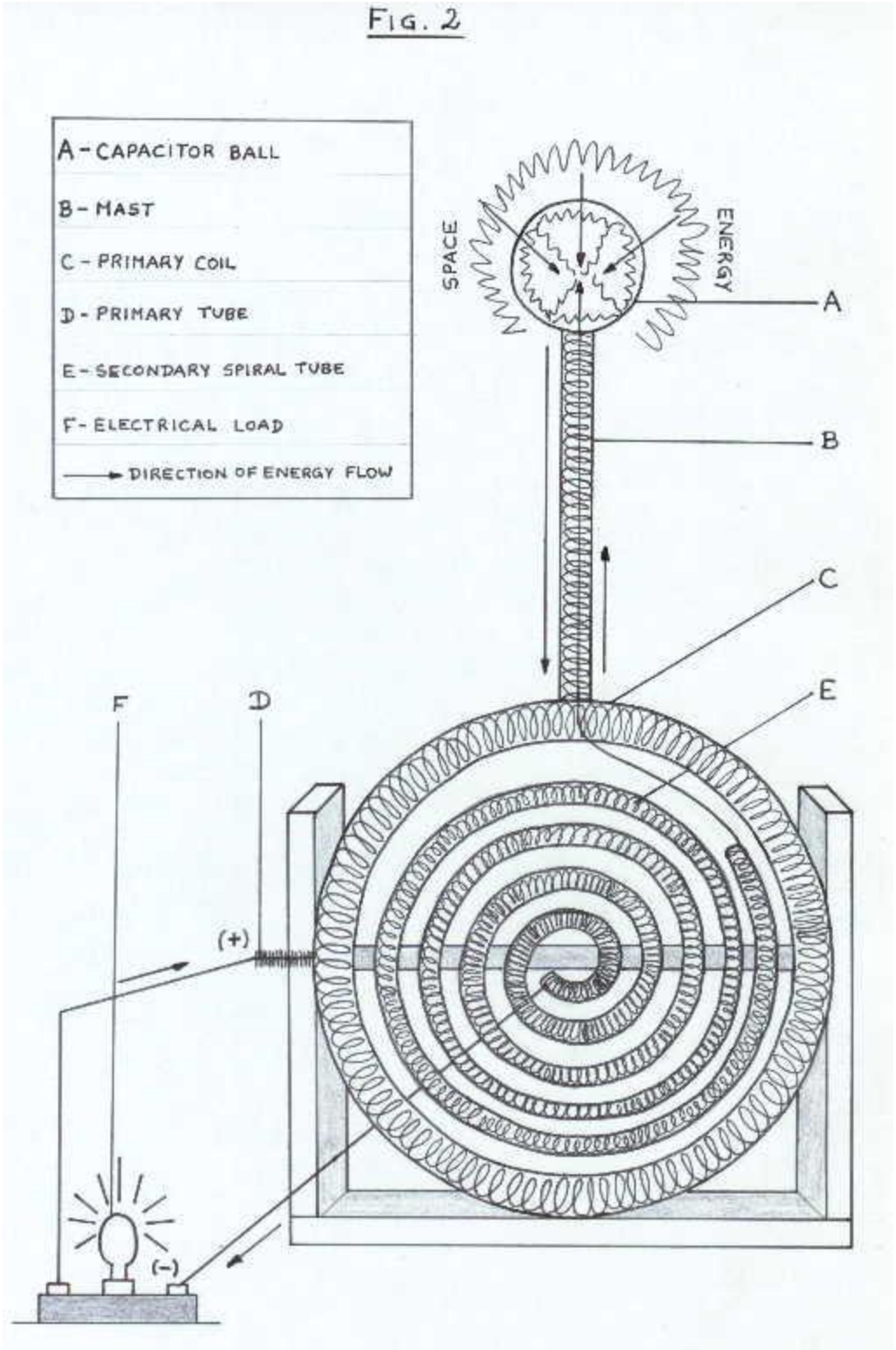
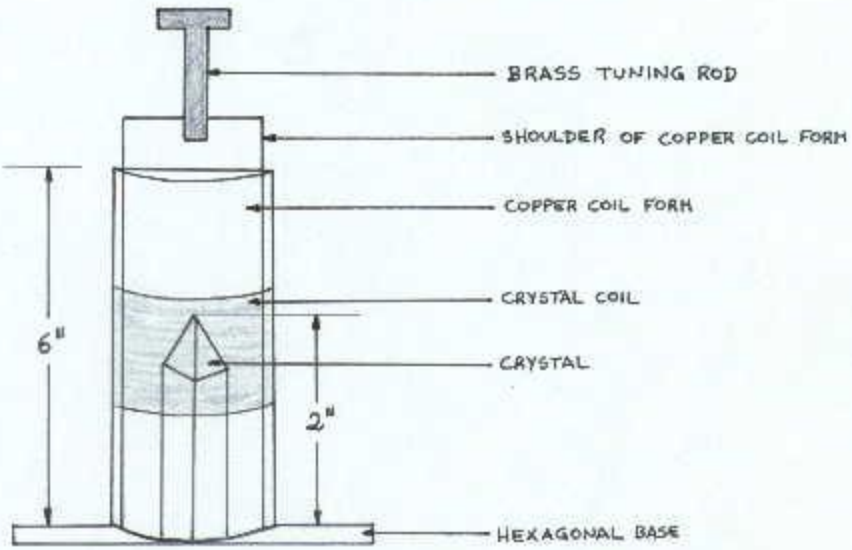
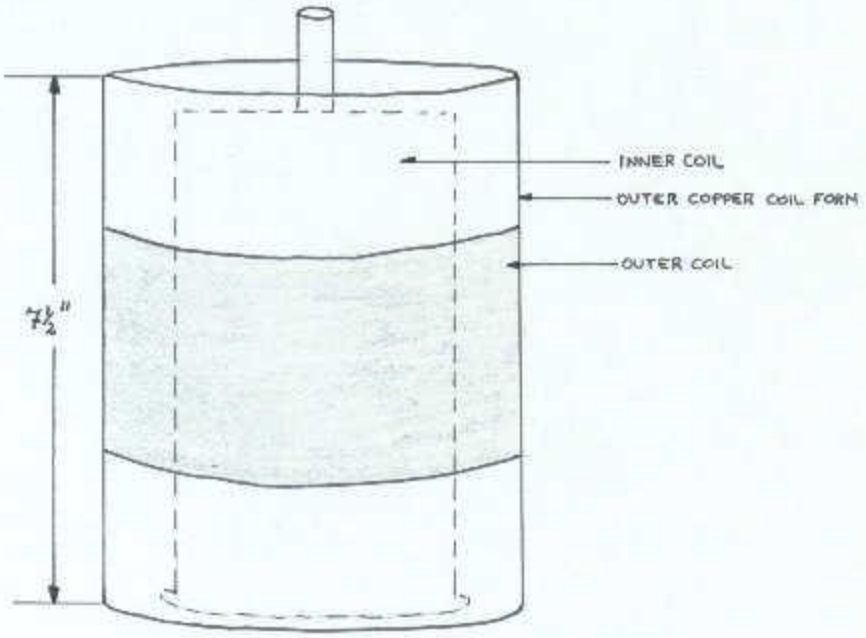

A - CAPACITOR BALL
B - MAST
C - PRIMARY COIL
D - PRIMARY TUBE
E - SECONDARY SPIRAL TUBE
F - ELECTRICAL LOAD
DIRECTION OF ENERGY FLOW
SPACE
ENERGY
A
B
C
D
E
F
(+)
(-)

FIG. 3 ASSEMBLY DIAGRAMS OF CONTROL UNIT



INNER COIL, COIL BASE & TUNING ROD



http://www.overunity.com/index.php?topic=2839.50;topicseen
« Reply #50 on: January 02, 2008, 07:32:57 PM »

Re: Disclosed: Peter Markovich and his 'essential' A.T.R.E.E.

That is interesting, i will have to experiment with the location of the sphere connector.

I have some interesting results, can anyone confirm these 2 things for me??

1) the current appears fo be proportional to the size of the sphere

2) voltage appears to be proportional to the number of turns in the primary divided by the number of turns on the secondary windings. - i.e. - increase the total number of turns on both coils and thus should increase the voltage.

im running out of ferrite rods, my longest one thus far is 14 inches. If anyone could play with a larger set-up that would be helpful.

hyp .:: if my calculations hold true, a 1kw unit should be approx 2-ft diameter hollow sphere (copper or aluminum)
and approx 300 turns on the primary / 150 on the secondary.

currently my biggest problem is an inconsstency in the curent when a load is attached, the current drops exponentially from 130ma down to 0 after a 10-15 seconds (with a 14-inch rod [60/30 turns] + 9-inch sphere)

This leads me to believe the sphere is acting as a sort of "capacitor", charging over time from the induced voltage diference. I need to experiment with completely discharging the sphere, then measure the "charge time" along a current-based-scale.
Im guessing there is relationship to the charging-time of the sphere, to its discharge time (i.e. -current out) .

Solution :::-- Construct two devices, discharge one intentionally, at the halfway mark of the discharge time, to offset them, then collect them as a low-voltage A/C signal, through a square-wave rectifier to produce a (steady) DC output.

any thoughts? or anyone that can test these things and confirm/deny what im seeing here? thanks.

---

sm0ky2, Hero Member

Re: Disclosed: Peter Markovich and his 'essential' A.T.R.E.E.
« Reply #53 on: January 04, 2008, 09:45:35 PM »

my 2 largest voltages thus far have come from the 9-inch spheres (these are the argest i have)

copper sphere (9in) yields a consistent 0.13v DC potential between the lead from the secondary lead ot the bottom of the rod. (-0.13v if measured in the other direction)

the aluminum sphere (9in) yields a varying voltage potential between 0.04 - 0.9v DC, im not sure what causes the variance - my two best guesses are temperature and/or the mixture of different metals in the aluminum alloy.
[i could not obtain a hollow sphere made of pure aluminum - they are hard to come by, and i was also told that it would quickly form an oxide layer on the outer (and inner) surface, which would act like an insulator, destroying the effect we are trying to achieve.]

My next attempt is going to be constructed with a hollow Brass sphere, im shooting for 12-14 inch if i can find one. if it has to be custom made, i'll get the biggest one my pockest can afford.

at best, what i have is approx 2/100th's of a Watt, which decreases over the discharge time of the sphere (capacitor).

i have not yet been able to achieve a non-stop DC output of any measurable current, the current is only present when i let it "charge" for a few seconds.

also i have found an increase in ferformance when you completely seal(air tight) the hole in the bottom of the sphere, around the rod shaft. - this seal also doubles as an insulator for the inner coil lead, between it and the sphere, allowing a much closer solder point at the top of the rod. - although my next one will be attached actually up INSIDE the sphere just under the "point", my mind keeps telling me to do this for some reason, so im gonna go with it..

Brass should perform slightly better than the copper, it lies between copper and silver on the list of metals
silver, gold, or even platinum/titanium are probably the best metals to build this device out of, but i am not rich enough to build a golden toy Smiley

honestly i think the "ground-battery" gives a much better power output for the cost of parts, but this does have the advantage of mobility, so im going to toy with it for a little while longer. - if anyone has suggestions to try, or results of their own i would appreciate as much input as i can get at this point.

p.s. i mentioned in an earlier post about using a ferrite rod - disregard this - continue using non-ferromagnetic rods, it does not have the advantage that i thought it would have, and may in fact decrease performance, or at least make it inconsistent.

---

the more i toy with this, the more i tihnk "comming from the aether" is not what is happening here at all.

If i had to describe this effect, it would be along the lines of a peltier effect, along a temperature constant. There is a voltage potential, but (almost) no current flow.
if the circuit is isolated (open) the cummulative charge density can build up.

which "auto"-charges some types of capacitors over time.

This capacitor, just happens to be a sphere.

i have not been able to detect any ionic disturbances with my static-detectors, and they are extremely sensitive at a close range, so i am confident there are no ion accumulations involved.

If you want to see this effect in greater quantities, get a pelter thermoelectric "CPU cooler", and attach it to a capacitor at ambient temperaure on both terminals.
(you can increase the voltage obtained by placing it in a magnetic field.)

i think the coils could essentially be replaced with a strip of dissimilar metal attached from the sphere to the bottom of the rod.
voltage would be obtained between the sphere and the top of the rod. this effect is achieved by the coils, not by induction, but by increasing the conductive path on one side of the circuit, which is (synthetically) the same as using a different metal.
many designs, in fact used different metal coils

when there is a thermal difference between the two ends, the situation is extremely compounded with differing energy levels, but at a thermal equilibrium, there is simply a voltage potential, with current so low your meter probably will read 0.000, but will charge a cap over time.

---

hi saintsnick,

it says 5% of the rod inside the sphere, not 1/5, it's a big difference.

spiral, out.

The rod and sphere must be electrically isolated from one another.

we are talking about a hollow sphere here, not a ball with a hole drilled in it. It must be very thin and smooth inside and out.

The type of metal may vary, but they fall within the class of non-magnetic metals (copper,silver,gold,platinum)

iron or steel will not work, because it induces an opposing magnetic field within the material that cancels out the electric potential.

Be SURE that your wiring is NOT paramagnetic. you can test this by placing a magnet to the wire. If it is attracted, find a different wire. (if you're using copper wiring you dont have to worry about this)

The wires used in the 2 coils should be proportionally sized (meaning that the larger wire is divisible by the diameter of the smaller , or by a common denominator of the two)

Also the number of turns should be proportional to the opposite degree (2x size = 1/2x the # of turns)

the (inner) coil should be bare copper wire. an insulated copper wire actually has an inductance, which will prevent ANY current from flowing through it. rather we provide a circular (shorted) path for some of the energy to flow through (on the surface of....). The secondary coil is insulated to created the induction effect to drive the load.

Hope this helps.

[as for the mile long Tesla thing, it's size has no bearing on the effect Its massive size was designed for one reason and one reason only,

--To Achieve Incredible Ammounts of Energy from One Device - so he could play with it consistently without interupting the commercial power-grid his machines were hooked to. I dont believe he ever got a chance to actually make this large version of the device before his laboratory was confiscated.]

Hi All;

I was playing around with the
ATREE I had built earlier in this post and to my surprise there might be something to this design after all. Earlier I had tried many different things to try and get voltage from the device but my meter showed nothing.. Well It turns out my meter was faulty! When I tried checking the voltage with a new more sensitive meter I was getting a small but constant voltage of 80 to 100 m volts. I tried putting different capacitors across the two output leads and was able to vary the voltage substantially. With two 50 volt 22000 uF dc capacitors in parallel I am able to maintain .15 volts . I has gotten as high as .7volts. When I attached a 2500 volt ac microwave capacitor to the ATREE I was able to actually get a spark after about 10 minutes of charging. The output is definitely DC..I tried putting a resistor across th leads after the capacitor and it drained the voltage to 0. It will slowly build the charge after a while and return to a steady state. I don't have a low voltage LED to try on it but when I get one I will try it.

I'm not sure how to harvest this voltage but it is definitely acting like a collector. I know my device is crude but maybe a properly built one will get better results.

I am currently building a RENE- RATER and will post some pictures soon for anyone that is interested.

NO, I did not change a thing. The primary is wound with #26 magnet wire just like the original diagram in this posting shows. The only things that I changed was my meter and the way I attached capacitors to it.

Joel McCLAIN & Norman WOOTAN

The Magnetic Resonance Amplifier

An Introduction to the Magnetic Resonance Amplifier

Joel McClain: Magnetic Resonance Amplifier - Description of Operation

Vangard Note

J. McClain & Norman Wootan: New ZPE Breakthru - Magnetic Resonance Amplifier

Vangard Note

Tom Bearden: Ferroelectric Capacitors and the Magnetic Resonance Amplifier

J. McClain: The Rule of Nines

Hal Fox: Meeting The One-Watt Challenge

Keelynet BBS Messages

Scott Little & Hal Puthoff: Evaluation of Magnetic Resonance Amplifier (MRA)

S. Little & H. Puthoff : Error Analysis of MRA Test Results

S. Little & H. Puthoff : Clarification of MRA Test Conditions

N. Wootan, J. McClain, & R.Taylor: MRA2: Magnetic Resonance Antenna?

Parts Sources for the MRA

Dan Davidson: US Patent # 5,568,005 ~ Acoustic-Magnetic Power Generator

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An Introduction to the Magnetic Resonance Amplifier

by
Joel McClain & Norman Wootan

With low-level ultrasonic input signals, the Magnetic Resonance Amplifier (MRA) produces usable direct current power at levels above unity. This circuit is based upon the work and theories of John Ernst Worrell Keely, and is offered into the public domain in his memory.

Introduction ~

Without lengthy discussion about the aether, tetrahedral geometric aggregate resonance or the Rule of Nines, it is possible to understand this circuit as basically a tuned magnetic and quartz amplifier.

However, it was necessary to study those subjects in order to design and build the MRA, so if you want to fully realize how it works, avail yourself of the files on KeelyNet which contain all of that and much more.

In the MRA schematic below, there is a tunable low-power oscillator which supplies a signal to one side of a barium titanate transducer. The opposite side of the transducer is connected to a primary coil which is wrapped around a barium ferrite magnet core. The opposite end of the primary goes back to the oscillator.

A secondary is wrapped around the primary and is connected to an ordinary bridge rectifier, and the output of the bridge is applied to a DC load. A filter capacitor can be used on the output of the bridge, and was used on the MRA which we built. Additionally, a load resistor across the capacitor will keep the output DC from getting too high as the circuit is tuned. We found that a 30 ohm, 10 watt resistor was sufficient.

Once this has been assembled, put a voltmeter across the output resistor to monitor the voltage rise as the circuit is tuned. Adjust the oscillator frequency to provide the highest DC output. During this process, be aware that the voltages across the piezo and the coil will be very much higher than the signal level which you are applying. We have seen combined voltages of almost 1,000 volts AC with only 30 volts AC of signal input.

When the circuit is tuned, the magnet will be "singing" at around 8,000 to 11,000 Hz. If the piezo sings, you are exceeding its power capabilities and will need to reduce the number of turns on your primary. The frequency that resonates both the piezo and the magnet at optimum resonance will be three times (three octaves above) the frequency at which the magnet is singing.

This is the nine harmonics that are mentioned in the Rule of Nines.

To test the circuit, place a precision, high wattage, low ohm resistor in series with the output from the oscillator to the piezo, and measure the voltage drop. It should be very small, less than 0.1 volt AC. Use this value to determine current in the series circuit, and then calculate power.

Next, measure the DC voltage across your output load resistor, and once again calculate power. You should be between three to four times above the previously calculated input power.

Once the circuit is in operation, you will note that the voltage will vary by 0.1 volt DC or more, depending upon the time of day. This is due to the nature of etheric forces inherent in the Earth's magnetic field. Watch for peak voltage at or before sunrise.

In our circuit, we measured 0.084 volt AC drop across a 2 ohm series resistor, for a total of 0.685 W dissipation in the primary. With this, we attained 2.75 W of output power and used this to drive a lamp and a motor. Increasing the signal voltage had the effect of decreasing the primary current while boosting output power, thus improving the power gain ratio. We believe that larger power systems can be built by using larger coils, more piezos, and a lower frequency, as long as the aggregate combination is within the resonant frequency range of the components.

The MRA is essentially a means of releasing the electrical energy stored in magnets. As such, it is an AC battery with DC output. It can be used for a portable, self-charging power supply with a solid state oscillator and rechargeable battery. For those who want a synopsis of the technology, the following paragraphs are offered, but it is strongly suggested that you follow up this reading with a more thorough study of the KeelyNet files.

Matter = Energy. To change matter, change the energy. Creation of a magnet is achieved by a process which causes the matter to be both expanded and compressed at the same time, with the result that a magnet is in a constant state of collapse. This is why magnets attract material with similar lattice structures, as they attempt to fill the energy void which created them. The "domains" of the magnet are fixed after the process of magnetization, and the only way to extract electrical energy is to physically spin a coil relative to a magnet.

However, it is also possible to induce virtual rotation by applying the resonant frequency of the magnet, which causes the lattices and the domains to vibrate. However, the power required to do this is greater than the energy released by the virtual rotation. Therefore it is necessary to increase the vibration without using excessive current.

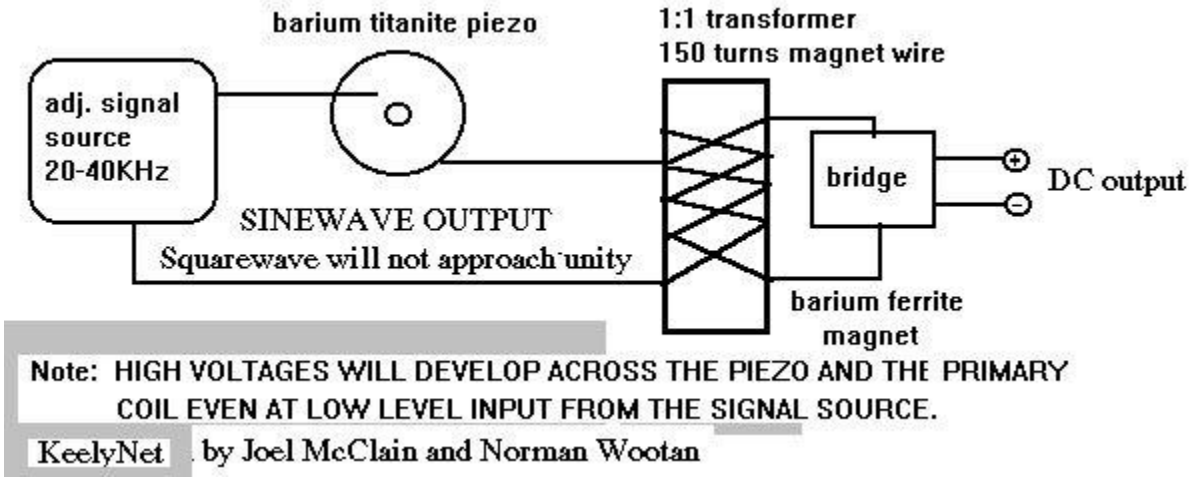
The piezo has a virtually inexhaustible supply of free electrons, and it releases them when it is stressed. Using the piezo in series with the primary coil will almost eliminate primary current, because it is voltage which stresses the piezo, not current. Therefore the piezo can be stressed

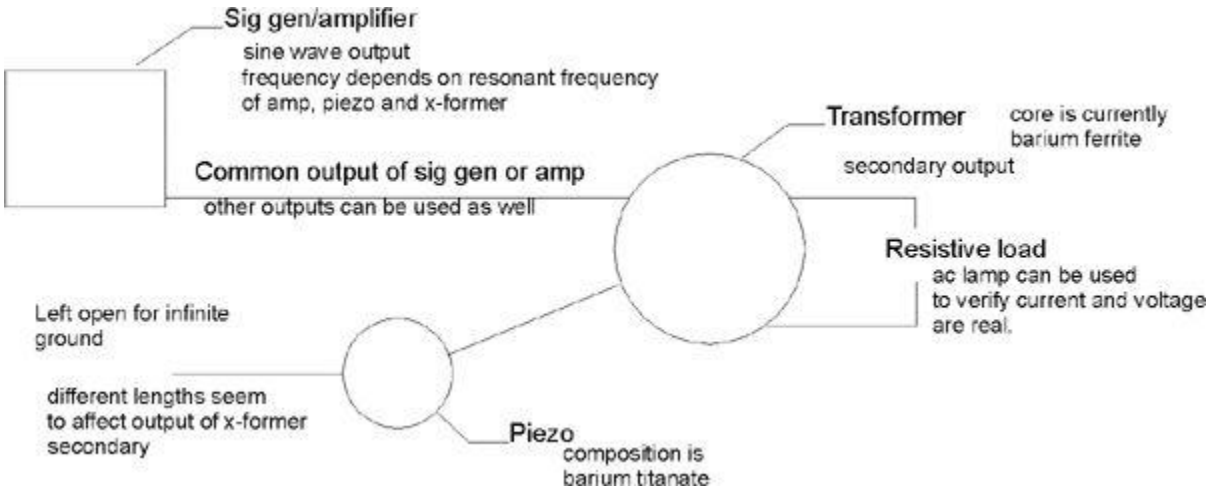
with very little actual power, and provide the current to the primary coil which vibrates the domains of the magnet.

The piezo is the catalyst for the circulating current with the primary coil. The circulating current is additive, and this is the reason for the high potentials developed across both the piezo and the primary coil.

It is at this point that resonance becomes important. You must have three octaves of separation between the magnet resonant frequency and the signal supplied to the piezo. The circulating current is rich in harmonics, and this is necessary for the operation of the circuit.

Although the circuit is simple, it utilizes the concepts of phi, of virtual rotation, of tetrahedral geometry, piezo and transformer theory, and electrical knowledge. It is not suggested as a beginner project, because of the high voltages present. For engineers and technicians of experience, it may be difficult to accept that the MRA is above unity. The ramifications are enormous. Hopefully, it will help to build a better world.





The Magnetic Resonance Amplifier: Description of Operation

by
Joel McClain

The MRA is a series resonant LC circuit in which power gain is attainable as a result of the increase in effective impedance under certain operating conditions. When the series impedance increases, primary current is reduced. When the power available from the secondary coil either remains the same or increases as the primary circuit impedance increases, a power gain occurs.

This is not possible with a series resonant circuit made of conventional materials. Even unity power transfer is considered to be unattainable as a result of accumulated losses in the components, which are passive (reactive) devices. Materials and construction methods are chosen for these components based upon the type of application and frequency to be applied, with the goal of minimizing losses.

A typical capacitor with polyethylene dielectric has a dielectric constant of 2.3 times that of air. Air has a constant of 1.0, and is the basis for comparison. Titanium dioxide, however, has a dielectric constant maximum of 170, and a corresponding power factor of only 0.0006, comparable with polyethylene, so that the dissipation of primary current in the dielectric is extremely low. This is where the comparison ends, because the titanium composite "capacitor" is also a piezoelectric device as well as an excellent capacitor.

Heat adversely affects the power factor of most dielectric materials. Titanium zirconate, however, contains polar molecules which rotate as thermal pressure is applied. This rotation increases the dielectric constant if the frequency applied is equal to or lower than the resonant frequency of the dielectric.

At series resonance, the rotation of polar molecules contributes to heat; as the dielectric constant increases, a corresponding release of free electrons occurs, as a direct result of the piezoelectric properties of the device.

In application, the MRA is tuned at resonance for maximum power transfer, then detuned slightly for maximum power gain. This relates directly to the use of thermal pressure at resonance, and the effect that this has on continued polar rotation and the release of donor electrons.

The coil, or primary of the MRA is a magnetic core which, relative to the fixed capacitance of the piezo, is a tuned permeability device. This is often used in RF devices to attain a stable resonant frequency. Magnetic materials are chosen based upon the operating characteristics of the intended application to reduce eddy currents in the operating range.

In these applications, the resonant frequency of the magnet itself is avoided, as this would "beat" with the oscillating current. However, in the MRA, this is the exact effect which we want.

The barium ferrite magnet resonates audibly at frequencies which are harmonics of the series resonant frequency. The effect of this in a typical audio application is called harmonic distortion, and is not desirable, but once again, in the MRA, this is what we want to occur.

There is energy in the harmonics, and this energy serves to both counter eddy losses as well as to oppose primary current flow, while contributing to circulating current within the resonant circuit.

The net effect of this, is that when the MRA is detuned, harmonics of the audible frequency "beat" with primary current, opposing its flow, while the increase in circulating current couples more power to the secondary, and therefore to the load. This is how the power gain is attained, basically by considering the naturally occuring harmonics as beneficial instead of as undesirable effects to be filtered out.

When the MRA is detuned, the effective impedance increases as seen by the source, while the power available to the load decreases in less proportion. This is measurable by using resistive equivalent circuit testing. However, the detuning is load dependent, and slight adjustments are required if the load requirement is greater than the power band of a harmonic interaction.

After retuning, the power to the load will increase in quantum intervals as the circulating current is reinforced by the reaction of the permeable magnet core. This will be seen as slight incremental voltage increases across the load device.

Once the magnet is "ringing", it's frequency and therefore harmonics remain stable, as long as the series resonant range is not exceeded. Therefore, the detuning affects the piezo only, and the circulating current increase is a result of the phase relationship between the harmonic and the source.

Voltage amplification is seen across the primary, measurably higher than the source voltage, and this is "seen" by the secondary. This is not the same thing as a power gain, because the power gain is a direct result of effective impedance.

It should also be noted that the term "virtual rotation" has been applied in describing the operation of the MRA. The comparison is made with a generator, in which relative motion occurs between a coil and magnet. Rather than use physical energy to rotate a mass, the MRA uses resonance to rotate the energy.

This is seen in the polar rotation of the piezo dielectric as well as in the molecular energy occuring in the reactive component of the magnet, ie, the ringing. The lattice structures of the piezo and magnet are compatible for virtual rotation, and the materials complement each other electrically.

In the past, researchers have noted many effects which occur at aggregate resonance, which typically includes a range of three octaves. Anomalous energy gains were referred to as "aetheric". The aether was believed to exist outside of the three physical dimensions, and could be "tapped" for free energy at resonance.

Aetheric energy is said to be limitless, but to vary locally with increases in earth magnetic fields at sunset and sunrise, like the tides of an infinite ocean. This effect is not thoroughly understood, but has been observed in the MRA, as increases in output in the early morning, and decreases in the early evening. This is still being studied.

Experimentation will determine the optimum MRA design for a specific range of applications.

Vanguard Note

The use of Lenz Law (back EMF) is legend in free energy circuits. When the back EMF is reversed and phase matched to the forward EMF, you have an increase in efficiency because of the reduction of eddy current heating through the addition of the previously wasted power.

This is generally understood to apply primarily to magnetic flux, yet because frequency is involved, phase conjugate principles play a major part. Phase conjugation applies to all frequencies regardless of the type of energy being used. Harmony (constructive interference) and dissonance (destructive interference) are controlled using phasing and frequency relationships.

If the rhythmic energy flowing through the mass is made resonant to the mass aggregate resonance, you further reduce the resistance and impedance, thereby achieving unity and in some cases overunity.

Most people want clean and simple circuits. These would not entail physical motion or large inductive masses as are encountered in orthodox generators. The MRA circuit fits this approach very nicely because it does not involve moving mass, but rather moving energy harmoniously to produce energy.

Further information on the MRA, its operational characteristics, correlations and updates will be provided as they are documented.

New ZPE Breakthru - Magnetic Resonance Amplifier

by
Joel McClain & Norman Wootan

Please NOTE: This is a preliminary report that will be followed by updates with more detail. Future versions will include various measurements of the components used in the circuit that is currently running. From all appearances at this date, the circuit components will simply give varying outputs and do not appear to be all that critical.

It was felt that this information should be released to the public as rapidly as possible, rather than risk loss of the information or the demo by 'circumstances' beyond our control. There have been

too many discoveries which have disappeared by not being openly shared. We would rather risk being 'flamed' by other experimenters who actually BUILD THE CIRCUIT than take the chance of the information being lost by keeping it within a select group.

Our two primary fears are that someone will attempt to patent what is intended to be a gift to humanity, possibly with an intent to profit from others work or to lock it away, the other that it might be suppressed in some other fashion.

Therefore, the widest possible distribution is requested, and duplication attempted wherever possible. At the time of this correction to the original file, we have confirmation as to the numbers and others are working on the circuit on their own. Please take this information in the spirit of how it is given, as a gift to humanity.

The inventors are Joel McClain and Norman Wootan. You can contact them via KeelyNet or directly.

The circuit is being tested at various levels and attempts at duplication are under way. At this point, there is only one circuit. We will openly post other successful duplications or failures. Please feel free to try it yourself. The cost is minimal.

One other point, the crystal transducer was thought to be barium titanate and there is reason to believe it is in fact titanium zirconate. These are disc shaped, about 3" in diameter with a 1" diameter hole in the center. The disc is about 3/8" thick and is coated with silver on both sides. Thank you for your open- mindedness. They are advertised in the back of many electronics magazines for about $5 each. We have access to a small stock and might offer them for experiments should people ask for them.

Good luck, and SEIZE THE DAY!

Vangard Note

This device incorporates power multiplication principles using multiple resonances as claimed by Keely and Hendershot. It also corresponds in some ways with Floyd Sweet's VTA and Joe Parr's energy spheres from pyramids.

Joel called Sunday night in an excited state. He and Norman took turns explaining what they had achieved using this circuit. The power input measurements were about 600mWatts and yet the circuit was generating about 2.5 Watts on the output. Norman hooked up a DC motor and he said it was spinning like crazy in addition to a light bulb glowing brightly.

Norman was laughing and said they'd beat Harold Puthoffs' One Watt Challenge as issued at the 1994 ISNE conference in Denver. This has created quite a bit of excitement and Puthoff now has a faxed copy of the circuit. No doubt it will be everywhere in a very short time. The hope by Joel

and Norman is that others will duplicate the initial effect and be able to expand on it to derive useful power.

Sweet claimed something on the order of 1:3,000,000 over-unity. The input power to his device was 10 VAC at 29 uamps (290mWatts). The output had been loaded to as high as 3,000 Watts.

The initial MRA circuit is something on the order of 1:5 and is believed to be scalable. Joel says the coil he had wound around the barium ferrite magnet was not in the least precision and he is of the mind that a huge coil surrounding the magnet will produce a proportional increase in power.

Early talks with various KeelyNetters about the Sweet circuit led many of us to believe that Barium, when excited, rings for a long time when the exciter is removed. At the ISNE conference, Don Watson confirmed this with his analogy of glowing luciferase as found in fireflys or other phosphorescent materials. A weak stimulation continues to produce light for a time after the stimulation is removed.

So, here is a wonderful opportunity to build a pioneering device. If you have questions or suggestions, you may direct them to Joel McClain or Norman Wootan at KeelyNet.

I think they both need to be commended for their willingness to share what many would keep proprietary or die with the secret.

Ferroelectric Capacitors & the Magnetic Resonance Amplifier

by
Tom Bearden

In a nonlinear ferroelectric capacitor there are three major nonlinear processes involved, so it is possible to carefully choose and arrange conditions so that the current through the capacitor moves against the voltage across its terminals.

With adroit switching and timing, and some consideration for resonance effects, it is in theory possible to use such highly nonlinear effects in a circuit to allow (1) an overpotential at the terminals of the battery as a reaction from the ferroelectric capacitor, (2) consequent recharging of the battery via that back potential on the battery side, while the load is also being powered, (3) consequent driving of the load on the load side of the terminals, and (4) having a bypass ferroelectric capacitor across the terminals of the battery, where the capacitor is in the "current against the voltage" condition.

McLain and Wooten patented a great little MRA (Magnetic Resonance Amplifier) system, based on that application. Dr. Robert Bass, a very fine electrodynamicist of exceptional knowledge, experience, and ability wrote the patent for them, and assisted in their work. For that he was persecuted, unjustly attacked, and suffered financial difficulties. The "system" does not forgive

highly qualified scientists who take a serious interest in "perpetual motion machines" -- as permissible Maxwellian open dissipative systems are erroneously and derogatorily labeled by the orthodox scientific community. Any scientist violating that inquisition suffers the consequences.

After technical discussions back and forth, the Patent Office even notified Wooten and McLain that the patent had been accepted and the patent would be issued. Within days, to their consternation the patent was rejected and that was the end of that.

In other words, the fix was in.

Our Own Experience In "Obtaining" Proper Ferroelectric Capacitors ~

Here's an interesting little tidbit, for what it's worth. We here at CTEC had included a specific use of ferroelectric capacitors (FECs) in one of our own patent applications. We attempted to obtain an FEC on the open market, one with the publicized nearly- square S-curve of hysteresis. No capacitor manufacturer we contacted had one for sale! I went all the way to a Swedish company, was assured they made just what I needed, and purchased several from them to be shipped by airmail. In due time they arrived. They did not have the square S-curve at all, but were carefully layered to eliminate that S-curve, into a rather straight slanting curve. That kind of curve is absolutely useless for overunity applications.

Now why would anyone wish to purchase a supposedly nonlinear capacitor for its very nonlinearity, and instead purchase one that has been altered to behave just as linearly as possible? Why would a company advertise such a nonlinear capacitor, then sell you one that is highly linearized? And considering the rather substantial literature on nonlinear capacitors with square S-curves, why do not the capacitor companies sell such?

We eventually found there is indeed a U.S. manufacturer of ferroelectric capacitors with precisely that S-curve hysteresis loop. There was just one little problem. They had an agreement with the U.S. Navy for all their production of those capacitors, and in that agreement they were not to sell any to private persons or companies.

Now why would the U.S. Navy wish to restrict a perfectly unclassified, open component from being sold on the open commercial market? Zounds! If one were a conspiracy buff, one might even try to connect this with the U.S. Navy's long suppression of the Kron negative resistor. Do you suppose there could actually be some kind of connection between the two? Why of course not! Paranoia and all that, you know. And still one wonders...

The literature continues to publish tests of just such ferroelectric capacitors, etc. Contacting several of the researchers who author those papers, we found that they (at least the ones contacted) were all making their own ferroelectric capacitors if they wished one with that square S-curve! No one seemed to know where we could just purchase one off the shelf.

Maybe all that is just coincidence. And maybe not.

A Possible Interpretation ~

What the square S-curve hysteresis loop means is that, in one region of operation, with only a very tiny voltage change, you can get a rather enormous current change from that capacitor. In another region of operation, you can get a very large voltage change from the capacitor for a very small current change. In other words, biased into one region, you have essentially a voltage device. In the other region, you have essentially a current device. Neither device will "cost" you very much energy to operate it in its region. However, if you then nonlinearly mix the two outputs just right, as we filed on methods of doing, then bingo! You had a mixer device whose output now had both large current and large power, but you "paid for" and input not nearly so much "energy dissipation" (remember, engineers calculate energy dissipation flow, never energy transport flow!) to the mixer as what would be output by the mixer.

The whole question is this. We all know about ordinary nonlinear mixing and mixers. We know that two signals can indeed be mixed nonlinearly. Can we build a nonlinear mixer and a dual circuit, where we feed a voltage-like signal in and also a current-like signal in to the mixer, get the two combined into a high voltage, high current signal output, and do that without back-field coupling onto the two input "signals" to force equal energy dissipation in the input.

Look at this very carefully. There is absolutely no conservation of energy law that requires that the energy input circuit dissipate as much energy as does the load circuit that receives the energy to power it. So why are we taught only those mixing circuits that will indeed force equal input dissipation? We need three things in the input: (1) lots of voltage, (2) lots of current, and (3) small energy dissipation. That means we need a "voltage-like" input and a "current" like input, which do not interact with each other on the input side of the mixer. We then need a mixer that will mix the two into a single signal with high voltage and high current, but will not back-couple its fields onto the input circuit to up the input dissipation.

Is all this mystery in trying to obtain square S-curve ferroelectric capacitors really due to the fact that it is possible to use them together with other circuit components to produce such an overunity mixer? Could something like that be behind what happened to McLain and Wooten, and to Dr. Bass? Again, at this point we wonder...

So you think such odd mixing violates the conservation of energy law? Then think again. There is no valid law of physics anywhere -- in complete contradiction to the assumptions in most electrical texts -- that you have to conserve work. Energy, yes. Work, no. The energy that a circuit captures can involve the voltage only. Remember, W = fq. To get lots of W (joules) collected for use to power loads, we need lots of V (that is, Df) and lots of q. We then need them mixed (interacting together). That's it. Anything else is what the circuit we construct is doing to fight us back. So, it would seem that we should focus on reducing the ability of that circuit to fight us back, while still doing the voltage-amperage mixing and interaction thing.

Even in the flawed old electrodynamics, one volt is one joule collected per coulomb of charge collector. So if you place one volt on a circuit which has few Drude electrons for collection, you get very little collected energy in that circuit (and note that the energy dissipated in that circuit can only be the energy that it first intercepts and collects). And if you then input the same voltage to a circuit with lots of Drude electrons, this second circuit will collect (and can then dissipate) lots of joules of collected energy.

When you change the voltage of a circuit, you change the potential energy available for collection and dissipation. How much it collects and dissipates, then depends upon how many collectors it has to do so, and the dissipaters it has to change the form of the collected energy.

So one trick would appear to be to feed a nonlinear mixing unit from two circuits: one optimized for voltage and starved for current, and the second starved for voltage and optimized for current. The one remaining trick is to prevent any back-field coupling from the output of the mixer back to the two feed circuits. If you accomplish that, you have yourself a nice little overunity device, perfectly permissible by the laws of physics and thermodynamics, and one which does not violate conservation of energy. It darn sure violates "conservation of work", however. For that matter, so does a windmill or a waterwheel, or a solar cell. You yourself do not have to perform work on something to get it to collect energy (asymmetrically regauge). It can collect the energy freely, if you arrange it correctly. Something else -- such as a free flow of energy from the environment -- is perfectly capable of doing that work on the intercepting collector, so that collection of energy in the circuit occurs.

In my view, McLain and Wooten were accomplishing something very similar to our notion of nonlinearly mixing a low power high voltage input and a low power high current input, but using ferroelectric nonlinear resonance as the "magic" mixer to combine cheap high voltage with cheap high current and obtain the product of the two while only paying for their "sum", so to speak.

Think about it.

But if you wish to pursue that approach to overunity, let me advise you to first do your homework on nonlinear resonance, as opposed to the linear resonance in almost all the normal textbooks. It's not at all just a "capacitance-inductance-resistance" business or just simple LC resonance. LC resonance alone has never added a single excess joule of energy to the power system.

The Rule of Nines: Resonant Geometry and the Zero Point

by
Joel McClain

"Nest two tetrahedrons and you have the keys to the universe."

The word "rule" has several different meanings -- as a form of law, or as a form of dominion, or as a measuring standard. This text uses the word in all three contexts to define the effect of the supreme chord, the trinity of harmony, in the universe.

In the late 19th and early 20th centuries, independent researchers began to notice the "anomalous" effects of applying resonance to a controlled experiment. Then, as now, this area of "science" is far from the mainstream. The results of those early experiments, such as the

lightning of Tesla and the motors of Keely, have been ignored both as science and as history...at least in America.

Elsewhere, the work of Tesla is revered and has been "amplified" by paid research. With the creation of the Magnetic Resonance Amplifier, or MRA, perhaps history and science will have to take a second look. The theories behind the MRA are the same as those of Tesla, Keely, Russell, Bearden, King and others. The application, however, in a closed-loop ZPE device, takes a sharp turn away from effect and into application.

Look at either a piece of quartz or a magnet, and you are looking at trapped energy. Tap the quartz, and you will get a spark as the electrical potential of the quartz instantaneously jumps. Spin a magnet relative to a coil of wire, and electrical current flows in the wire. How do we extract the power of these materials without the attendant physical energy required to either tap or spin them?

Matter = energy. To convert matter to energy, resonate the matter.

To achieve energy output which is above the energy applied at resonance, use three octaves, and there will be three harmonious notes in each octave, for a total of nine resonant frequencies.

These notes occur naturally when the base frequency applied is three octaves above the magnet's resonant frequency, and equal to the resonance of the quartz.

In this way, the potential applied to the quartz "taps" it, without the need to use physical force. The result is electrical output. Connect this output to a coil around a magnet, and the domains of the magnet, which comprise a tiny portion of its weight, and which do all of the "work" in a generator, will be forced to spin. This spin is called "virtual rotation", because it is the spin of energy without the spin of the matter.

However, this is only one application. How can we be sure that the "rule" applies anywhere else, much less universally? We have to go very far back in history to find the answer to this question. It involves Phi, the universal constant, and delves deeply into the construction of earth's great tetrahedrons.

Nest two tetrahedrons, and put them in an orb, and you have a miniature model of the earth's magnetic field. Where the "bases" of the tet's touch the orb, you have the latitudes where all of the ancient pyramids were built. The "top" and "bottom" points are the north and south poles. This shows the naturally occuring magnetic resonance of earth as an "orb" in rotation. Connect lines between the points, and you have a map of the ley lines, which were mapped very accurately thousands of years ago.

Models of the earth as described above have been found in the ruins of every civilization which built pyramids. Earth is, as it must be, a model of the natural harmonic relationship which exists at every level, from the universe itself to the subatomic. The relationships have been understood for a long, long time. This knowledge, and the use of the energy which it can be used to provide, was believed to be the curriculum of "mystery schools" in Egypt and Greece.

If you look at the lattice geometry of silicon or germanium, you will find tetrahedrons. In his famous "ring", Hans Nieper allowed the silicon of transistors to achieve self-resonance, with the result that the circuit became lower in weight. This implies that resonance may also be the key to countering the effects of gravity, or rather, the effect called gravity, for gravity is an effect, not a force.

Gravity is "suspended" when you cancel the spin of the energy which comprises matter by resonating the matter. By virtually rotating the lattices, the subatomic particle spin virtually stops, like a spinning object seen with a synchronized strobe light. Because gravity is a complex quadrupole effect, when you stop the spin, you lose the effect.

The matter which comprises the quartz and the magnet of the MRA is comprised of cube lattices, each of which is a nested tetrahedron at 45 degrees relative to the polar axis of the molecules. Together in a circuit, there is a 90-degree phase separation, which allows the resonant energy to create the needed harmonics to fully resonate both materials. This is the application of the rule of nines.

It is a standard, the standard of the geometry of the universe; it is the ruling law of nature; and it is the measuring tool for all electrical and mechanical interaction. If, as some have suggested, the ancient "sacred" knowledge was shared by extraterrestrials to permit the construction of the pyramids, and if, as we have seen, resonance is the key to anti-gravity as well as to free energy, then the tetrahedron has very far reaching implications.

Meeting The One-Watt Challenge

by
Hal Fox

New Energy News 3 (6): 19-21, November 1995

The Magnetic Resonance Amplifier Tests: We have received copies of two official reports from independent laboratories that show power out ranging from 1.6 to over 4 times the input power to a magnetic resonance amplifier. One of the important factors in this device appears to be the type of magnetic material used as the core of the transformer. The transformer appears to be the most important component in this unusual energy-amplifying circuit.

Keelynet BBS Messages

Message 9850 (12/13/94 09:31)
From: Joel McClain
To: All
Subject: MRA Input

For those who plan to build their own MRA, you will have to use sine wave signal wave input. I've tried square wave, and although the magnet will "sing", the output DC power will be below unity. I believe this is because the circuit can't "breathe" evenly with square wave input.

Message 9875 (12/13/94 19:23)
From: Joel McClain
To: All
Subject: MRA "Tech Bulletin"

If you build your own MRA, there are a few things that you should know that aren't in the file yet...they're still being discovered. First of all, don't wear your quartz watch while you work on the MRA, as the quartz will react with the circuit and run slow.

Secondly, avoid using scopes for anything except occasional waveform checks, because there is so much flux in the air that it will build up on the scope and skew your display.

Thirdly, use a hand-held as opposed to a panel meter if you can because the flux buildup on a panel meter chassis will destroy the front end transistors...I know, as I did it.

Fourth, the constant ringing will drive you nuts and give you a headache in short order.

Fifth, if you take the piezo out of the circuit after it has been on for a while, as it cools, it will keep building up charges, and will
bite you when you pick it up.

Sixth, if the piezo screeches, shut the MRA down and wait for a while before you start it up again. The piezos are bad tempered if you overdrive them, and will sulk for a while before they work right.

This ain't your daddy's oldsmobile... we're still learning to drive it so there may be more of these "field bulletins". ~ Joel

Message 9876 (12/13/94 20:00)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill: Point well taken. We will prove out the circuit and you will know by the message traffic as to our progress. We all value your input and guidance therefore jump in and help us out as we sort this beast out. I have a very similar circuit to Joel's and we compare notes constantly. I wound a coil on a barium ferrite magnet with my windings running parallel to the "Bloch wall" where Joel's coil has the windings running perpendicular to the "Bloch wall". My I/O ratio so far as I can determine is around 12:1 which is some improvement but we need testing. Bert Pool just left to go and build a similar circuit so the more folks that build, test and improve on the design the better. Thanks again. ~ Norm

Message 9882 (12/14/94 08:17)
From: Norman Wootan
To: All
Subject: MRA (Tech Bulletin)

Since Joel and I have created a lot of interest in the MRA device we will place everything on line so that no "stone is left unturned". Long ago I saw a sci-fi movie of a suitcase size device that you could plug any size AC load into it and it would power it with no problem. I dreamed of building such a device by employing a block of natural quartz with a mechanical oscillator attached to all faces (Tesla oscillator) to force the quartz to yield free electrons. I envisioned the output (high voltage) to be stored in a capacitor bank (1 kilo joule) them the output going into an inverter circuit and stepdown transformer to take this piezo generated voltage down to a useful AC voltage. Now Joel and I have combined this effect to the resonating of the lattice structure of a magnet to sum the outputs of the piezo effect and the ferro-resonant effect to give an over-unity total at the bridge rectifier. Last night Bert Pool came over to gather up the needed supplies to build a prototype circuit to do independent evaluation. After I had run the circuit through the paces noting the outputs and thoroughly discussing what we thought was going on here I turned off the meters, scopes and the signal generator and finally went to bed. Well I woke up a 2:00AM with a headache, went to get the tylenol and went into the room with the test rig on the bench. I turned on the frequency counter and found that the circuit was running in free oscillation with no input. Although no power was being produced the free running oscillations were filling my living space with a high freq ultrasonic squeal that as Joel has warned will give you a migraine headache in short order. The free oscillation was [D[Ds around 44KHZ with the freq counter ranging up and down (no lock on). I had to take the circuit apart to stop the ultrasonic ringing. As Joel has pointed out these titanium zirconate transducers, once set into resonance will continue to ring for a long period. Since there is possible some conditioning taking place within the crystalline structure of the material I believe that over a long conditioning period (burn in time) the whole circuit can be make sensitive to a combination of two frequencies that are necessary. The first freq involved is the input to drive the transducer which has to be 3 octaves down from the fundamental natural frequency of the ferro-magnetic resonant frequency. Although it has not been mentioned before in "A" public on this net, Joel and I were successful in isolating and identifying the fundamental Ferromagnetic Resonant Frequency as being around 174.9 KHz. Doesn't it sound ironic that this freq should fall so close to what the Corums have determined that Tesla designed his big coil out in Colorado springs around? I have read several articles that speculated that the ferromagnetic freq or the earth natural magnetic field resonated around 180 KHz. With this 174.9 freq in mind we have applied the Joel McClain "Rule of Nines" to the circuit where we run the transducer at a freq that is a multiple of the fundamental 174.9 ferro-resonant freq. His circuit is running at a fifth and mine is running at a third. Example- I input a sine wave signal at 2.28 VAC into the series resonant circuit at 59070 Hz and get a voltage developed across the transducer of 26.04 V and a voltage across the coil of 24.02 with an output voltage from the bridge rectifier of 30.2 VDC. If every thing is running in an ideal phase relationship (transducer oscillations and ferro-coil oscillations) then the beat freq will partially sum the two voltages since they are in a series circuit and set up a circulating current in the primary which when the primary winding and the secondary windings have the proper impedance matching will extract the maximum amount of energy from the circulating current in the transformer into a healthy output at the bridge which is far OVER-UNITY, high I/O ratio.

My circuit is showing a 13:1 ratio at this time and I have not even approached a good impedance match in the windings. A real sharp RF engineer could sort all the details out in short order. I don't profess to be an RF engineer but have a good background in electronics. This is the reason for Joel and I going "PUBLIC DOMAIN" with the circuit so that some highly skilled folks out there can take this circuit and help develop it into something of practical use. We don't want PROFIT motivated people to "rip" off the idea for self gain. We want any potential benefits of the circuit to remain free for the taking. More notes as we learn more. As Joel says, "we are like teenagers learning to drive dad's Olds". A little help from interested fellow researchers is welcome. ~ Norm

Message 9883 (12/14/94 09:19)
From: Norman Wootan
To: All
Subject: MRA (Tech Bulletin)

In our discussion of the MRA circuit we keep referring to the key part of the circuit as being a transducer. Let me clarify this a little for I know there are a lot of folks out there who will be running around looking for that same device that we have. First let's settle the confusion about the type of material involved. Jerry Decker and I bought some of these devices from Tanner Electronics here in Dallas and were told that they were BARIUM TITANATE transducers made for the ultra-sonic heads in the ultra-sonic welders used in the plastics industry. There are numerous manufacturers of such welding devices in which they stack these devices (each rated at 50 Watts) to get the total power needed to weld plastic by kinetic contact heating. A physical description is: 2 inch outside diameter round with a 5/8th inch hole through the center with a thickness of 3/16th inch with silver layered on each side which is convenient for soldering leads to the transducer. When employing these units they have to be suspended to that they are free to resonate. Don't lay them on a table or surface for this will dampen the free oscillations. We have not consulted an acoustical engineer to determine the best way to mount the units or attach the I/O leads so as to provide the optimum free resonances. We have discussed the employment of tuned pipes of the proper wave length ratios needed to enhance the free resonant or targeted resonance that we desire. I have even thought of a mechanical type of tuning fork device that would give us the Tesla described "CHILD ON THE SWING" type drive that would give the maximum output with the least possible input (wattage I/O). A good microwave engineer would possibly come up with a tuned cavity resonator which would drive the transducer at the optimum phase to extract the energy needed to drive the ferro-resonant coil in the primary. The magnet that Joel is using is from an IBM hard drive and is as follows: [A[D[B 7 inches long X 2 inches X 2 inches with the magnetic "Bloch wall" across the thickness. For those out there who may never heard the term "Block wall" it means the neutral plane in a magnet. The magnetic orientation is across the thickness of the magnetic therefore cannot be described as a bar magnet which has it's magnetic orientation along the long axis. By using a magnet which has the flux across the thickness and the windings are wound around the center of the long axis we have a coil which is wound with half of the winding turn in a "N" field and the other half of the turn in a "S" field. Makes no difference since the objective here is to ring the magnet into a resonant freq and it seems to me that it is easier to ring (mechanically) with the ends of the long axis protruding from the coil. In other words the "Node point" is under the coil with the free ends oscillating. There are several ways to suspend a bar that is in free resonance. All you have to do

is open your door chime and look at how the chime bar is mounted to extract the maximum acoustical energy from the hammer strike. The same objective applies here so there is a lot of work to be done to maximize this device. It is public so YOU can help sort it all out. Joel is using 150 turns in the primary and secondary of his ferro-magnetic transformer. Experimentation will provide the ideal ratios and impedance matching. Get with the program and provide free exchange of findings so all may benefit. ~ Norm

Message 9930 (12/16/94 18:04)
From: Joel McClain
To: Norman Wootan
Subject: Starting Over

Hi Norm ~ I'm breaking in another piezo. It's been on the sig gen for a few hours. I have 1.33VAC at 34.2KHz from the sig gen, measuring current in line. Current starts at 4ma, then slowly drops for about three minutes until it gets down to just 1ma. Since the 1.33VAC is RMS, nput power to the MRA is 1.33mw. Output is 3.1VDC across 4.7K from the decade box which calculates at 2.0mw. Since the meter is rated at 200KHz, I know that we are well within its range. Gain at this low level of signal is 150%. We will learn how to condition a piezo from this, which we can pass along as another tech note. It looks like we have to start at the leakage threshold and work up in terms of power applied. It will take a LOT of tests to keep from conditioning parts until they are just barely marginal under useful load. Oh well, nobody ever said it would be easy. The noise from the magnet is amazing, even at low power. ~ Joel

Message 9949 (12/17/94 09:39)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ I have had my version of the MRA running for about 14 hours to condition the magnet and the driver piezos so when I visit you we can do some parallel testing on the two circuits for more verification of over-unity operation. After running all night the circuit is definitely in the (+) column so we need to nail down the degree. I will bring out my scope Techtronic 80 MHZ with a current probe so maybe we can further bracket that elusive input figure. Everyone agrees that when you are dealing with AC at 40KHZ with harmonic bucking taking place it is sometimes very difficult to pin down the real input wattage. The "equivalent resistance" test that you are doing is I guess the only way, except for some sophisticated equipment that Hal and John have down at the "Institute for Advanced Studies" in Austin. More later ~ Norm

Message 9951 (12/17/94 10:50)
From: Joel McClain
To: All
Subject: MRA in Conventional Theory

The MRA is a series resonant LC circuit in which power gain is attainable as a result of the increase in effective impedance under certain operating conditions. When the series impedance

increases, primary current is reduced. When the power available from the secondary coil either remains the same or increases as the primary circuit impedance increases, a power gain occurs.

This is not possible with a series resonant circuit made of conventional materials. Even unity power transfer is considered to be
unattainable as a result of accumulated losses in the components, which are passive (reactive) devices. Materials and construction methods are chosen for these components based upon the type of application and frequency to be applied, with the goal of minimizing losses.

A typical capacitor with polyethylene dielectric has a dielectric constant of 2.3 times air. Air has a constant of 1.0, and is the
basis for comparison. Titanium dioxide, however, has a dielectric constant maximum of 170, and a corresponding power factor of only 0.0006, comparable with polyethylene, so that the dissipation of primary current in the dielectric is extremely low. This is where the comparison ends, because the titanium composite "capacitor" is also a piezoelectric device as well as an excellent capacitor.

Heat adversely affects the power factor of most dielectric materials. Titanium zirconate, however, contains polar molecules which rotate as thermal pressure is applied. This rotation increases the dielectric constant if the frequency applied is equal to or lower than the resonant frequency of the dielectric. At series resonance, the rotation of polar molecules contributes to heat; as the dielectric constant increases, a corresponding release of free electrons occurs, as a direct result of the piezoelectric properties of the device.

In application, the MRA is tuned at resonance for maximum power transfer, then detuned slightly for maximum power gain. This relates directly to the use of thermal pressure at resonance, and the effect that this has on continued polar rotation and the release of donor electrons.

The coil, or primary of the MRA is a magnetic core which relative to the fixed capacitance of the piezo, is a tuned permeability device. This is often used in RF devices to attain a stable resonant frequency. Magnetic materials are chosen based upon the operating characteristics of the intended application to reduce eddy currents in the operating range. In these applications, the resonant frequency of the magnet itself is avoided, as this would "beat" with the oscillating current. However, in the MRA, this is the exact effect which we want.

The barium ferrite magnet resonates audibly at frequencies which are harmonics of the series resonant frequency. The effect of this in a typical audio application is called harmonic distortion, and is not desirable, but once again, in the MRA, this is what we want to occur. There is energy in the harmonics, and this energy serves to both counter eddy losses as well as to oppose primary current flow, while contributing to circulating current within the resonant circuit.

The net effect of this, is that when the MRA is detuned, harmonics of the audible frequency "beat" with primary current, opposing its flow, while the increase in circulating current couples more power to the secondary, and therefore to the load. This is how the power gain is attained,

basically by considering the naturally occurring harmonics as beneficial instead of as undesirable effects to be filtered out.

When the MRA is detuned, the effective impedance increases as seen by the source, while the power available to the load decreases in less proportion. This is measurable by using resistive equivalent circuit testing. However, the detuning is load dependent, and slight adjustments are required if the load requirement is greater than the power band of a harmonic interaction. After retuning, the power to the will increase in quantum intervals as the circulating current is reinforced by the reaction of the permeable magnet core. This will be seen as slight incremental voltage increases across the load device.

Once the magnet is "ringing", it's frequency and therefore harmonics remain stable, as long as the series resonant range is not exceeded. Therefore, the detuning affects the piezo only, and the circulating current increase is a result of the phase relationship between the harmonic and the source. Voltage amplification is seen across the primary, measurable higher than the source voltage, and this is "seen" by the secondary. This is not the same thing as a power gain, because the power gain is a direct result of effective impedance.

It should also be noted that the term "virtual rotation" has been applied in describing the operation of the MRA. The comparison is made with a generator, in which relative motion occurs between a coil and magnet. Rather than use physical energy to rotate a mass, the MRA uses resonance to rotate the energy. This is seen in the polar rotation of the piezo dielectric as well as in the molecular energy occurring in the reactive component of the magnet, i.e., the ringing. The lattice structures of the piezo and magnet are compatible for virtual rotation, and the materials complement each other electrically.

In the past, researchers have noted many effects which occur at aggregate resonance, which typically includes a range of three octaves. Anomalous energy gains were referred to as "aetheric". The aether was believed to exist outside of the three physical dimensions, and could be "tapped" for free energy at resonance. Aetheric energy is said to be limitless, but to vary locally with increases in earth magnetic fields at sunset and sunrise, like the tides of an infinite ocean. This effect is not thoroughly understood, but has been observed in the MRA, as increases in output in the early morning, and decreases in the early evening. This is still being studied. Experimentation will determine the optimum MRA design for a specific range of applications.

Message 9964 (12/17/94 14:31)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ Yes Joel and I both have Techtronic scopes and Fluke 87 true RMS meters to cross check all measurements and so far we cannot find the "flaw" in the test procedure if there is one. The only real test is "independent verification" which will be done by Hal Puthoff and John down in Austin. If you saw Jerry's message to me, I will be sending Walter Rosenthal a complete running circuit for a second verification along with a complete set of all the message traffic and "Tech Bulletins" to date. Joel and I have done all we can do as to verification due to not having some

very advanced equipment. The next step is on the work bench in the form of a voltage regulator stage, an oscillator stage and a MOSFET driver stage to drive the front end of the circuit so we can run it "stand alone". ~ Norm

Message 9966 (12/17/94 15:45)
From: Bill Beaty
To: All
Subject: mra piezo source?

The H&R catalog has LEAD ZIRCONATE TITANATE piezos, 1.5" by 1/10", 50khz. Think it'll work?

Message 9967 (12/17/94 18:17)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ Yes, those transducers will work but they are physically smaller than the ones we are using I figure when this circuit is verified that the next step will be to go to a natural quartz milled wafer of the natural freq we desire to same as the crystals used in transmitters except a lot larger. If you have access to a Thomas Directory at work, please look up Branson who makes the ultrasonic welders so we can get a source manufacturer from them. Maybe someone on the Internet will know the manufacturers of these transducers. This circuit is a mindbender when you study its characteristics. For example I started off this morning (after I let the circuit run all night to condition the magnet and piezo crystal) with a total over-unity power gain of 1.65:1 ratio. After playing with the circuit all day taking measurements after each adjustment or change of operating parameters, arrived at a 150:1 I/O ratio. Here are the figures: Input 15.34 VAC @ 54.9 KHZ with .57 Ma which is .000874 Watts which has to be adjusted for power factor by multiplying by .707. The output is: 16.75 VDC @ 78.8 Ma into a pure resistive load. This figures out to be greater than a 150:1 I/O ratio. I guess you have figured out how excited everyone is over this "Gadget". Now unless OHMS law has been nullified or there is some "spook" phenomenon that Joel and I cannot find then we have the 1 watt challenge in the bag by a wide margin. More as we learn more. ~ Norm

Message 9982 (12/18/94 10:13)
From: Norman Wootan
To: All
Subject: MRA (Tech Bulletin)

I know that there are quit a few folks out there running around digging up parts to build a MRA device to do independent testing. Let me share with you some findings that will assist all in this approach. First disregard the measurements that I gave Bill Beaty yesterday in a message about power gain. I like Joel find myself back at "square one". It happens like this, when you have this circuit up on the "ragged edge" where the first harmonic seems to be phase "beating" or attenuating the input current and providing potential only to drive the first stage resonance in the transducer, you disconnect the load to do the only accurate total power consumption test which is

"equivalent resistance" measurements so we can nail down the elusive power figure according to OHMS LAW. Well when you unload the circuit under the optimum operating conditions the transducers will immediately trip into a very powerful mechanical oscillations around 2KHz and self destruct in short order and at the same time put out a violent voltage that can soar above 1000 VAC which in turn will literally wipe out your driving amplifier and your frequency counter. Fortunately the scope is better protected on the front end. So what I am saying is that you begin all over conditioning a new set of driver transducers which even fresh out of the box will display over-unity output in the circuit. The people over at the manufacturing firm that makes these transducers are "smiling" and calling their stock broker to exercise some stock options in their product for I see a lot of you destroying a bunch of transducers in the process of testing and improving the circuit. Let me share with you some ideas. When I go back and read TOM BEARDENS works about potentializing a circuit without the attendant circuit that is normally involved we will have achieved the over-unity that we are seeking. After careful study of the MRA I can see how this device can be separated into two separate devices. First the piezo is a source of high freq potential which at 3 octaves above drive the ferro-resonant primary coil at the natural resonant freq of the magnetic material. Now I believe I have figured out the secret behind the Swiss M-L Converter known as the TESTAVISTATIKA or TESTATIKA for short. This device was developed in the group called METHERNETA by Paul Baumann and it has been seen by our friend Stephan Marinov. This ZPE tapping can be accomplished through potential being derived from any source such as the electrostatic charge developed in the Wimhurst type generator. The secret is in the MAGNETIC RESONANCE AMPLIFIER. Ken Shoulders and R.A. Ford demonstrated that what we term as harmless energy (electrostatic charge) when stored in a large capacitor is real charge separation and can do some interesting things such as exploding water, wire and other interesting research projects. If we take advantage of the mechanical oscillations of the transducer and operate it at a level of mechanical resonance (in free oscillation) that will optimize the voltage output (lets say 400 volts) which in turn we use to drive the ferro-resonant barium ferrite core coil then we can extract some serious power from the coil providing that we have done our homework and provided the optimum impedance matching and tuning of the circuit to maximize the final product. We are a long ways from our final goal of having a unit that we can flip a switch and the thing will run "stand alone". Joel and I have taken the first step by sharing with you our findings so let's work this thing out together as a "joint project". We will share all findings in these Tech Bulletins so everyone is on the same sheet of music. Now for some "spook" type anomalies that occur around this circuit when it is running in the ZPE tapping mode which is where we purposely de-tune the circuit upward in freq so that we get the "beating" effect from the first harmonic. When you see this on the scope it will appear as the sine wave pattern of the input being broken into little line segments by an invisible or transparent oscillation at a much higher freq than the primary driving signal which in the case of my circuit is around 56.8 KHz. Even when I have Ch 2 turned on with no signal (base line only) it also is broken into short line segments as if the electron beam is driven into cut off by this invisible signal. Any RF engineers out there seen this? Please explain same. I believe that all the phenomenon that is being observed by people such as Sweet, Aspden, Adams, Lambertson, Searl and Tom Bearden are all connected by a common thread. Let's "unravel it". ~ Norm

Message 9983 (12/18/94 11:03)
From: Joel McClain

To: Jerry Decker (Sysop)
Subject: Piezos are fragile

Hi Jerry ~ The piezos, for all of their 50 watt capability, are fragile, especially along the edges. I had mine soldered at the edges, and when it bumped into the magnet while in transport, it cracked. The piezo has to be free to vibrate... if you touch it while the MRA is running, you can watch your output drop off, so it's a question of finding a way to mount them "loose", yet protected. However, whoever accidently picked up my stapled pack of tech notes might let me know so I can pick them up... has all of the test data and correspondence with Hal, and was on the corner of the table. THANKS!! ~ Joel

Message 9984 (12/18/94 11:13)
From: Norman Wootan
To: Jerry Decker (Sysop)
Subject: MRA

Hey!! Jerry, Don Smith is right all the way. Let me explain --- he has basically the same circuit that we (Joel and I). In his circuit he is using a Tesla coil as the driver and trying to extract power in his secondary from the "feeble" background earth magnetic field. If Don had been privy to what Joel and I know (now everyone) then he could have incorporated into his circuit a powerful barium ferrite magnet which he could drive at its resonant freq and effectively do the same thing we are doing. In fact the Tesla coil instead of the transducer is a much better driving potential. It is inherently much more stable with much higher potentials being able to be achieved and the fact remains that the ZPE tapping occurs in the domains of the magnet in "Virtual Rotation". Thoughts Jerry and Joel? ~ Norm

Message 9985 (12/18/94 11:55)
From: Joel McClain
To: Norman Wootan
Subject: Tiger by the tail

Hi Norm ~ Sorry to hear that you also blew up your input amplifier. We've got a very powerful tiger by a very short tail with the MRA. It's purpose is to give power gain by bucking input current while using circulating current to drive the load, and this is done in a tuned, balanced state. As we've seen, unbalancing the MRA by removing the load can cause the "bucking" current to run open and blow up 40 to 50 watt amplifiers...with no other power applied. Even the flux from it blew up my panel mount DVM. Well, the good news is that we are over unity... the bad news is that we will have to cage the beast somehow. ~ Joel

Message 10033 (12/19/94 10:46)
From: Jerry Decker (Sysop)
To: Norman Wootan
Subject: (R) MRA

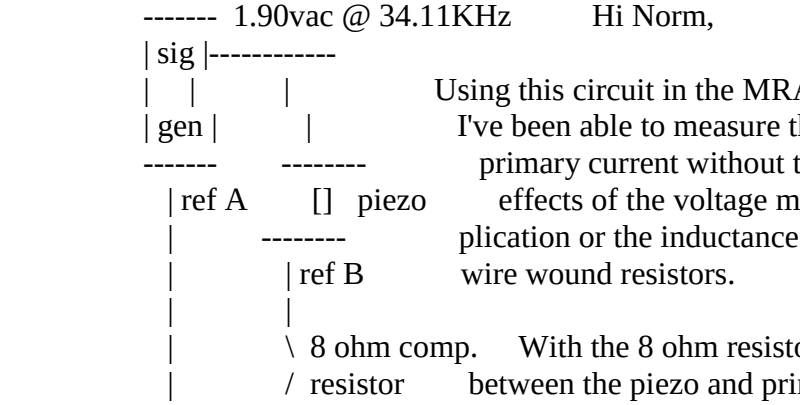
Hi Norm/Joel, et. al ~ Just got a call from Tom Bearden... He's excited and even though I sent the MRA to him last week, he wants it today...so I am faxing it...along with the MRA1 and the

UJTOSC (Woody's UJT oscillator file) because he can use all of it. As to the fracturing, he says this is due to pumping the potential field and went into a long explanation that I don't remember half of....he says his paper on stepped charging of the capacitors warns of this and they still haven't figured out how to get around it... He says they have transients exceeding 3000 volts and have smoked several test instruments on their end also... He says to be sure and warn Rosenthal of this before he trashes some of that very expensive stuff he will use... Tom says because the anomalies in such circuits are so radically different from normal electromagnetics, to prevent or at the very least ATTEMPT to minimize damage to their test devices and circuits.. They have adopted the approach of discrete charging only up to fixed levels... It is everyone's desire to get the max power out, but not at the expense of blown equipment, ruptured parts or circuits that burn out, so he thinks once the grad students and others start getting into it, they will work convergently (as everyone here does) to come up with the bottom line details of what works, what doesn't and what will produce anomalous effects... So, I have to get those faxes to him now, again, he said he is SO VERY PLEASED that everyone is working so well together and that the information is being so freely shared... ~ Jerry

Message 10041 (12/19/94 12:10)
From: Joel McClain
To: Bert Pool
Subject: MRA at preamp signal input

Hi Bert ~ At the meeting, you were talking about energizing an MRA with low level signal input, so I gave it a try with a weak stereo preamp. The input to the MRA was 0.562VAC and 1.1ma for 6.2mw of input power. The output power is only 2.2mw. After an hour, the input power power dropped off to 4.2mw as the circuit equivalent resistance increased from 510 ohms to 1.0K ohms, and the output power stayed the same at 2.2mw, but this is still only half of unity. Even given more hours of test, I don't think it will make unity. It's possible that the weak potential and resulting current are not enough to create the flux density and piezo effect that we need. ~ Joel

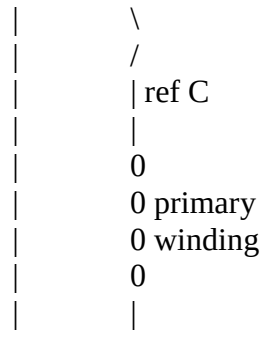
Message 10054 (12/19/94 21:14)
From: Joel McClain
To: Norman Wootan
Subject: (R) MRA



Hi Norm,

Using this circuit in the MRA I've been able to measure the primary current without the effects of the voltage multi-plication or the inductance of wire wound resistors.

With the 8 ohm resistor wired between the piezo and primary



On the output (not shown) is 5.80vac across 600 ohm resistive load for current of 9.7ma and power of 56mw. Gain is 56/11.9 = 4.66 times unity. Please try this and let me know what you get. ~ Joel

Message 10059 (12/20/94 07:55)
From : Norman Wootan
To: James Hartmann
Subject: MRA / Gravity

James ~ We have your speaker levitation experiment on the net as a file. A couple of days ago someone mentioned the harmonic rich wave form of the MRA as being the same as your output from the "distortion amp" when you were getting the levitation effect with the correct fundamental freq applied. All goes back to Keely with the multiple freq discord causing anomolous gravity effects. Sure wish you luck in the pursuit of follow-up info on the English report. With the Neiper Ring project we will need as much info as possible to achieve full anti-grav effects. ~ Norm

Message 10071 (12/20/94 14:04)
From: Joel McClain
To: Norman Wootan
Subject: E-Line Tests

Hi Norm ~ I like the idea of using the solid state amps to measure current differentials. I've tried to measure the difference in AC current to the sig gen by measuring the voltage drop across a 2 ohm resistor in series with line to the sig gen. Even with a Sola, there is more line variation than the 0.001VAC difference in drop that would equal the entire output power of the MRA. (.001/2 X 119.2VAC = 60mw). So, measuring input power in this way is out of the question. ~ Joel

Message 10090 (12/21/94 04:18)
From: Bill Beaty
To: Norman Wootan
Subject: fractured traces

On your strange oscilloscope results: I see this often, when the chopping frequency gets close to the frequency being triggered upon. If you are seeing these segmented traces when the scope is

in ALTERNATE triggering (or on a single channel scope) then it is real. But the chopper on a dual trace scope can easily create moving line segments of various kinds without anything weird going on. (Oh, I meant that I see it often at work, when doing frequency sweeps on circuitry)
.
Message 10094 (12/21/94 07:39)
From: Bob Paddock
To: Norman Wootan
Subject: (R) MRA

Another interesting thing that we verified tonight was that the natural ferro-magnetic frequency is approximately 174.9 KHz. This is a shot in the dark from my failing memory: I remember reading in my collection of one device that worked at 14.7 KHz. I don't remember then name of it for sure, but it was the one made with the large basket weave coils (Hendershot maybe?), you've probably seen the thing it is one of the common lead gen devices in this field.174.9 KHz / 12 = 14.575 KHz. 14575 / 1944 = 7.49 Hz puts it down around the Schuman range. A harmonic interaction with the Earth field? This could account for the time of day effects. Do you note significant changes at Sun Set and Sun Rise? Maybe this is significant, maybe it is not?

Message 10096 (12/21/94 08:11)
From: Norman Wootan
To: Bob Paddock
Subject: MRA

Bob ~ Yes, as Joel has mentioned several times in the message base, we do get variations in the output of the MRA at morning and evening testing. Highest output is early morning as the sun is coming up. I agree with your magnetic freqs for I have read many different theories each with a different freq associated. Joel and I feel that we have it narrowed down through better evidence than previous researchers. We will soon know for sure with a few more test that we have in mind. Will keep you posted. Yes, Please send the "Harris Catalog", Norman Wootan, P.O. Box 141049, Dallas TX 75214. I'll see that Bert has access to it for he is the circuit "Guru". Loves to play on the soldering bench. I would like to get your comments on the 12VDC powered audio amp test we did where the total current draw went down from an idle draw reading to a reading with the MRA in the circuit. Do you have reasonable explanation for this. Joel says that this little Radio Shack Stereo booster 40W amp is "class C" therefore can only go up on current draw when a load is applied. If idle DC current draw is 344 Ma and goes down to 192 Ma when the MRA is attached then what are we seeing. Should we attach a thermocouple to the output transistors to see if they are making "ice"? That is the only phenomenon that we have not found that is usually associated with ZPE type devices. For those that are new to the ZPE or "Space Vacuum tapping" scene there have been numerous reports of over-unity type devices that usually have one or more of the following phenomenon associated with their operation. (1) Over-unity output of energy of some sort whether it be heat, electrical, mechanical or light. (2) Weight loss, anti-gravity tendencies. (3) Cooling in the immediate area or in the device itself. Joel and I would appreciate any and all comments. ~ Norm

Message 10099 (12/21/94 11:44)
From: Joel McClain

To: All
Subject: MRA Anomalies

Eight days ago, the MRA was invented. Almost immediately, it began to exhibit over-unity characteristics. However, there have also been a lot of "quirky" effects...each taken separately might have been test equipment error or technician error. However, these effects are forming familiar patterns now...familiar but not always predictable. The toll in dead and damaged test equipment so far is one panel mount DVM, one frequency counter, two audio amplifiers, and numerous 60watt light bulbs.

Sometimes, when supplying the MRA from a 12VDC powered audio amp, the battery current will decrease compared to the battery current to the amp with no load at all, and at the same time, amp output voltage will increase...taken together, this indicates that the MRA is feeding energy back into the amp. Later, with no changes to the circuit, the MRA will behave like a normal load, and cause a small increase in battery current with a small decrease in amp output voltage.

The voltage and current waveforms look like dotted lines, where each dot and space segment is equal to 175KHz, which Norm and I believe is the free running resonant frequency of ferrmagnetism. We have never seen this before, and for that matter, neither has anyone else that we've talked to about it. Even with nothing on Channel B of the 'scope, the display will exhibit the dotted line effect whenever the MRA is running and connected to Channel A.

Anything and everything in the field of the MRA is affected. Should the MRA's output load become accidentally disconnected while the MRA is at resonance, an instantaneous and very powerful destructive surge will occur.

I THINK that the MRA, by resonating a magnet at mass aggregate frequency, is magnetically "linking" with everything in its field, and behaving like an "energy pump". We see this when we walk up to it and the output from the MRA goes up, even though the MRA is hooked up to a resistive load which is causing it to provide current. This also changes based upon the time of day relative to sunrise and set.

To test anything, you first must isolate it... By virtue of the design of the MRA, it cannot be isolated. It intrinsically links itself to everything with a coil or magnetic field, even to a quartz wristwatch if it is in the same room. As such, we get varying power gains, and the variations seem more to be a question of which test equipment is on the table at the time of the test.

Please bear in mind that this is a brand new circuit...as far as that goes, it's a whole new technology. Once the magnet has been resonated, and then disconnected from the rest of the circuit, it will continue to provide up to 25VAC at 60Hz using a human "antenna" to capture ambient energy in the room. Last night, Norm and I were measuring over-unity gains of 2X-3X, but we don't really know for sure if we were "pumping" the energy electromagnetically out of the test equipment, house wiring, earth's magnetic field, the ether, or some combination of the above.

We need some independent testing by individuals with awareness of the anomalies mentioned in this message. There is obviously a lot of power "in flux" which collapses into the MRA if the

load is removed, so there will probably be more equipment lost. There is also a whole area of gravitic anomalies to investigate, because the piezo will weigh measurably less when it is in the MRA circuit, and regain the weight when it is disconnected.

The original MRA is being sent out for engineering review, from which we hope to learn more, but the more voices that are heard from, the better our chances of finding out what is really happening. ~ Joel

Message 10103 (12/21/94 12:29)
From: Joel McClain
To: All
Subject: Addendum to MRA Anomalies

If the MRA's gain is caused by "pumping" energy from the test equipment, house wiring and earth's magnetic field due to electromagnetic linkage, would that be the same as "wireless electricity"? Tesla used the same frequency which is affecting our oscilloscope trace. Since the MRA is sensitive to sunset/sunrise, is it then going to exhibit higher gains at ley lines and grid intersections? With more power applied, will the MRA achieve zero gravity? Why do we only see the EFFECT of 175KHz on the scope, and not the waveform? Is it scalar energy being translated by the scope? If the MRA is linking with earth's magnetic field, how can we isolate test equipment, or for that matter, anything else on earth from it? Send all answers and any light bulbs you can spare to Joel & Norm.

Message 10104 (12/21/94 14:11)
From: Bob Paddock
To: Norman Wootan
Subject: (R) MRA

Bert wants more info on the "indestructible" transistors you mentioned. Call up Apex Microtechnology and ask them for a data book: 800-546-APEX. They make driver IC/OP amps that will run on +/- 600VDC (1200VDC total swing) at .5A, and other power parts. They also have some parts that are speced to 15,000V/uS Dv/Dt. Dv/Dt maybe what is burning up things rather than the absolute voltage. Some parts might be able to handle 1,000VDC but ONLY if rises slow enough, to fast a rise and you've got toasted parts. Check out the app notes in the back of the book on such things. The bad news are these things cost *BIG* bucks ($30-$500), but can still be a bargain when you considered the system equivalents that they replace. First this bad news the following part does NOT appear in the 1994 data book (bad sign): From the Unitrode 1990 data book: "The Unitrode UC195/UC395 family of devices are ultra reliable, fast, monolithic power transistors with complete overload protection. The devices act as high gain power transistor and have on chip, current limiting, power limiting, and thermal overload protection, making them virtually impossible to destroy". Doesn't look like that will help much since we can't get them. I'm still tracking down the N.S. part, they sold off their transistor division. And I have the indestructible audio amp data sheets on order. Another company in the power area is Supertex Inc; 408-744-0100. I'll keep looking for "indestructible" parts....

Message 10112 (12/21/94 18:30)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ The MRA is as we speak on a FED-EX flight to California going to Walter Rosenthal for the independent testing. Maybe you could write up some input and set up guidelines for Walter so as to assist his testing effort. After all this is your hand built version. If you would, run a few test runs on my "monster" MRA and we will send it to Hal down in Austin or we could simply just wind another exactly your original so they both would be testing identical units. What do you think? ~ Norm

PS: I'M waiting for an explanation as to why the overall current draw went down on my MRA when we tried the 12VDC amp test. The 50Ma rise was on your version. Remember we broke off the test when we got "negative" numbers. "Infinity Gain" ~ Norm

Message 10113 (12/21/94 19:23)
From: Joel McClain
To: Daniel Hill
Subject: (R) MRA

Hi Daniel ~ If we need RMS power for comparison with, for example, changes in the input power, yes we use the constant multiplier of 0.707, which is in the file info that we provided. Whether this is the exact phase angle for this circuit, without vector analysis, we don't know. The reason why we can't be sure is that we are vectoring harmonics for the express purpose of altering the effective impedance of the circuit. This is NOT what they teach at DeVry, but it is how it works. However, the world accepts the cosine of theta at 0.707 as the normal AC circuit power factor multiplier, so we use it. To the extent that the calculated output power performs the correct amount of work, such as driving a motor, it is as close as we can determine to be accurate. ~ Joel

Message 10116 (12/21/94 22:08)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ Gremlins are back at work. I started to take the power amp back to Radio Shack today but decided to do a test on it first. Glad I did for it healed itself. Remember what I said about my circuit shutting down and would do nothing? Well I think this MRA builds a field up around it and blanks out some equipment. The amp is OK now and operating just fine. Tonight I was running a new MRA like your original and suddenly it shut down and I could not get any output from the secondary no matter how much I increased the input to the piezo. The only way I solved the problem was to swap sides on the circuit, in other words swap the output leads over to the input and vice versa then it took off running again. Glad this is a 1:1 turn ratio winding. This a really weird device that will take some getting use to. ~ Norm

Message 10131 (12/22/94 14:26)
From: Joel McClain
To: Norman Wootan
Subject: Test of the "monster" MRA

Hi Norm ~ Tested the "monster" MRA with two magnets, large coils and four piezos. First tested it with low power from the sig gen only, then with the amplifier. Since the piezos were in parallel, I tested both parallel and series connections. Also tested just the transformer, with no piezos. The transformer alone is just under unity (half of one percent difference in power) at 144.5KHz. With all of the piezos in the circuit, the power out ratio dropped off.

Found that the best gain was with only one piezo, which added 1.2% over unity with the sig gen alone, and 11.8% with the amplifier. I used a regulated 12VDC 10A power supply to power the amplifier, so that there would be no chance of current dropping off as load was added, and found that the additional drain to the supply with the MRA connected was 40ma. It took 180 ohms of equivalent load on the output of the amp to produce the same 40ma increase, so the MRA "looks like" 180 ohms to the output of the amp. That is the effective impedance of the MRA, which we can use to determine current and power into the MRA.

With 9.73VAC output from the amp at 180 ohms, and 18.8VAC from the MRA at 600 ohms, we have 372mw RMS into the MRA and 416mw RMS out, which is 1.12 times unity.

I think that the reason why the gain isn't higher is that the difference between max power out of the MRA and max power gain of the MRA is too wide of a spread in frequency. We used 85% as a "rule of thumb" with the first MRA, but this one requires 70% change, which puts us on the edges of the resonant range, and we lose much of the power of the harmonics. I'm not sure whether this is a result of using two magnets or more wire or a combination of the two, but the best power gains seem to occur where the freq spread between max power and max gain is less. We'll have to experiment with number of turns on a single magnet to find the "sweet spot"... no pun intended. ~ Joel

Message 10132 (12/22/94 15:31)
From: Joel McClain
To: Bill Beaty

Answering as many questions as possible in one message.

Bob - Your guru is right. The current drop was seen on a DVM, and is likely caused by a meter error as a result of the surge at power-on. Also, a drop in input voltage would naturally cause a corresponding drop in input current, so we are using a ten amp regulated supply to avoid that pitfall. The current increases by 40ma after the initial surge, as measured on an analog meter.

Michael - The aggregate resonant frequency is between 34KHz and 35KHz, although we found the resonant frequency of the magnet to be around 8KHz to 11KHz. The 174.9KHz is what we believe to be the resonant frequency of ferromagnetism, based upon Tesla's experiments and

some of our own. We don't see this in the circuit on an oscilloscope, but we see wave chopping at this rate.

Bill - The signals which we are inputting and extracting are all sinusoidal. We're using battery power as much as possible,
although the sig gen is AC powered, and we've had to use a 12VDC supply to avoid battery drops during measurements. I'm not sure what the retrace or refresh rates are for this scope, but it should be higher than 175KHz on a 80MHz scope, I would guess. Yes, I know how the "observer effect" is interpreted in mainstream science, except for the folks who work at particle accelerators who have both seen and documented it. There is an "interconnectedness of all things", but once it's measurable, mainstream science jumps all over it. God bless them, every one.

Since the "original recipe" MRA has been sent out for engineering analysis, we'll have to wait until its return before we can use it for more tests. ~ Joel

Message 10134 (12/22/94 17:10)
From: Jerry Decker (Sysop)
To: Bill Beaty
Subject: (R) Addendum to MRA Anomalies

Hi Bill ~ That's some real food for thought that has applications with a gravity wave detector circuit....it too could be driven over an area and the field mapped to produce a topology...Townsend Brown did this back in the 40's I think on a Navy submarine... James Hartman sent me a copy of the book with the details...nothing spectacular but it definitely showed gravitic anomalies, way before the 'mascons' discovered on the lunar surface... excellent idea Bill! ~ Jerry

Message 10138 (12/22/94 17:49)
From: Norman Wootan
To: Jerry Decker (Sysop)
Subject: Capacitor Charging in MRA Field

Jerry ~ I have been thinking about the thread that you and I had going back in the summer about how capacitors could be charged by dropping them or spinning them. Well, Joel and I are going to do some cap charging test via the MRA fields. If we are getting this anomalous energy fields that will show up to 27VAC on a meter with everything turned off it is possible to use the device as a passive tuned energy collector. Sort of like Tesla's Cosmic Ray Converter in which he charged capacitors and drove simple motor devices. Worth a few hours of test setup. ~ Norm

Message 10141 (12/22/94 21:09)
From: Joel McClain
To: Jerry Decker (Sysop)
Subject: (R) Addendum to MRA Anomalies

Hi Jerry ~ Thank you... I didn't pick up on the implications, so glad you did. You know, the first g-wave detector that I built went nuts when that last big earthquake hit Japan. It was the electrolytic capacitor with a 747 and a small piezo speaker. Maybe the MRA could be monitored by someone in CA next to a seismograph to see if it can correlate tectonic activity with gravity fluctuations...maybe even help give some warning in advance. It would be worth it just for that alone.

Increases in solar wind as a result of solar flares might also be detected in time to shift power lines to avoid power failures.
Actually, if the MRA is made directional, it could detect any large energy shift from any source, because they are all reflected on the earth grid at near light speed. Here in Texas, we could "see" tornadoes forming. Might just be the early warning system for all natural (and unnatural) occasions.

Message 10172 (12/23/94 20:51)
From: Joel McClain
To: All
Subject: The 300 turn secondary and 60W bulbs

There was an error in message # 10148...the MRA tested today was made by Norm for test, and has a two to one step up ratio, i.e., 150 turns on the primary, 300 turns on the secondary. From what I can measure, this is superior to the original one-to-one ratio of the first MRA, which I wound to test theory. Makes sense though, because as the magnet inhales energy, the more secondary you have, the more energy will be collected for the load.

Also, have noticed that when light bulbs (ordinary 60W bulbs) blow, they do so with great vigor and a brighter than normal flash. The filament is exploded off of its posts, and flies around the inside of the bulb with enough force to leave striations on the glass.

In the past, I have associated this with an accumulation of virtual particles on the neutral lines of the house (from other experiments). This accumulation causes the lines to superconduct when a light switch is turned on, because the neutral is no longer neutral but at an elevated virtual potential. The effect is the same. ~ Joel

Message 10175 (12/23/94 22:08)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ Since you have been such a valuable asset to us in getting out the word to the Internet and Compuserve I am going to send to you an "original" piezo and magnet of the type that we are using in our MRA devices. As you have seen by Joel's message prior to this one he has run test on one of my 2:1 ratio MRA units. I have built 6 MRA's to date and all have displayed over-unity to differing degrees. I have been playing with different configurations of magnets and winding ratios while Joel is doing the "hard core" testing. Heck most of my equipment is out at his house. Just kidding fro we have duplicate of all test equipment and so does Bert Pool in our

group. This way we all three can build independent of one another and compare results. Joel is sending the 2:1 ratio MRA that I built to Harold Puthoff down in Austin for additional testing while Walter Rosenthal is testing the original MRA out in California. I will get your care package off to you Tuesday along with a document that I want you to post to Internet. ~ Norm

Message 10176 (12/23/94 23:56)
From: Joel McClain
To: Bill Beaty

Hi Bill ~ I don't think that all combinations of piezo and magnet types will work. The evolution in the original design was first, the resonating of a magnet, and determining the resonant range of the magnet, and second, adding a piezo which would resonate three octaves above the magnet. The magnets which we are using will "sing" a pure tone at just over 8KHz, and double that is 16KHz, and double that is 32KHz. The freqs that we are applying to our MRAs is beween 34 and 35KHz. This is also just below the peak resonant range of the piezos which we are using, and which were originally designed for ultrasonic welding.

The lattice structure of the piezo and magnet should also be compatible in order to get the harmonics... cube lattices, which are nested tetrahedrons. First wind a primary and secondary around your magnet, and apply a variable frequency to the primary while watching the secondary on a scope or high freq meter. Where the secondary output peaks, you have the resonant freq for the magnet.

Use that to find a piezo which has a resonant range three octaves higher. The easiest thing would be for you to use the same parts that we are using...they have already been found to be harmonious. If you want to experiment with what you have available, that's fine too, and may yield more and better results, or at least useful data on which combinations don't work until you find one that does. You will have to keep your mass aggregate freq well below 100KHz, or you will be above the alpha cutoff freq of audio xistors and diodes...you won't be able to get DC out, in other words. Let us know what you want to do. ~ Joel

Message 10188 (12/24/94 11:20)
From: Joel McClain
To: Bill Beaty
Subject: MRA as a "solar" device

Hi Bill ~ As Paul Harvey would say, now here's the "rest of the story" on the MRA as an energy pump. The energy source is the earth magnetic field, which gets its power from the combination of rotation and solar wind from the sun, so the MRA is technically a solar power device. As the MRA "warms up", it is extending its vortex upward and "linking" with layered fields of the atmosphere. At each link point, you will see the MRA output increase by a specific quantum interval.

The MRA is attracting the electromagnetic energies, and funneling them back to the magnet, through the coils, which couple a portion of the energy to the load. Other conductors which are in the path of the vortex also collect energy, specifically the neutral wires. You can reduuce the

output of the MRA by detuning it, and within a few hours, the output will be back up as a result of the quantum linked increases, and regardless of the energy applied to drive the MRA's oscillations.

BTW, the MRA does have max output when the coils are aligned with magnetic north and south...and drops off when the coils are aligned toward east and west. You are going to have a LOT of fun with this! ~ Joel

Message 10191 (12/24/94 12:18)
From: Joel McClain
To: Norman Wootan
Subject: MRA has a 'magic square'

Hi Norm ~ I THINK that we have a 'magic square' relationship with the magnet, because when it was resonated in the 'monster' test, it was almost at unity (with no piezo) at 144.5KHz. If we divide 144.5 by 17.5, we get 8.25KHz, and three octaves up is the mass aggregate frequency of the MRA. Why divide by 17.5? Because it is the Khz multiple of 175KHz, the ferroresonant frequency. Another piece of the puzzle is now in place. ~ Joel

Message 10192 (12/24/94 12:34)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel: I built a second 2:1 ratio MRA and began testing this morning after conditioning the magnet and piezo through the night. Well here are the numbers that by the way have all been verified via scope measurements in addition to meter readings: Input; @ 34364 HZ, 1.385 VAC @ .000167A for an output of 4.89VDC into 10,000 OHM load @ .000433A on which I have applied no PF correction on the input which according to my calculations yields a 9.18:1 power gain. Check the figures and comments are welcome. There seems to be a big debate going on in various minds as to the application of the .707 PF correction when we are not sure of the exact nature of this circuit, i.e., do we have a capacitive leading current circuit or is it an inductive, current lagging circuit? The way I understand PF correction is that you have to know the degree of lead/lag relationship between the voltage trace and the current trace. Am I correct or not in this statement? ~ Norm

Message 10194 (12/24/94 14:50)
From: Joel McClain
To: Norman Wootan
Subject: The Rule of Nines...revisited

Hi Norm ~ Connect two MRAs together, with the output of the second connected across the primary of the first. Get them in resonance, and then turn off the sig gen. They will become self-resonant exactly three octaves above the freq that you were applying (Rule of Nines again), and the output power will go up 200-300%. Then turn the sig gen back on, and see how long it takes to get the circuit back "under control" of the sig gen.

Because we are resonating each MRA at the third octave of the magnet, that means that we are at the first octave of a greater aggregate, which occurs as the free running frequency. Three octaves above 33.75KHz is 135KHz, the free running freq, which is equal to the ferromagnetic 175KHz minus the magnet res freq and the piezo res freq. Given enough drive, this bird will fly. ~ Joel

Message 10200 (12/25/94 13:30)
From: Joel McClain
To: All
Subject: Creactive Effect

The purpose of this message is to introduce a new term to describe the type of components which are used in tuned resonant devices. In the past, "active" has been used to describe switching parts, such as vacuum tubes and transistors. "Passive" is used to describe components such as carbon resistors, and "reactive" to describe coils and capacitors, which react to changes in frequency by altering their impedance to the flow of current. All of these devices consume power in application.

None of these apply very well to components that consume power but which also use resonance to tap the ether for equal or greater power than that which they consume. Therefore, to fill the void in usable vocabulary, I suggest the term "creactive". The term implies that something is created, which is NOT the case...energy cannot be created...however, the EFFECT of actively resonating material for the TRANSLATING of energies gives the appearance of creating energy.

The components are not creactive unless and until they are in the process of creating the effect. This should not be too confusing, as the same relationship exists with other components. A coil, for example, has no impedance...only resistance...to DC current. It is passive to DC, and reactive to AC. If anyone has a better terms to suggest, or sees any technical problem with "creactive", please let me know. Thanks!

Message 10209 (12/26/94 10:07)
From: James Johnson
To: Norman Wootan
Subject: Chopped Sine Wave

Norm, last month I was plotting sine waves using Mathcad trying to determine what Keely was doing with his destructive use of harmonics. It appeared to me that he was subtracting out the 3rd, 9th, 27th, 81st, 243rd & etc. harmonics from the 1st harmonic. The 6th harmonic may have been added to create a shrinking effect on a molecule however? He kept saying that large impulses were being created when he was plucking his strings. The frequencies that were creating these impulses seemed to be in the terahertz range which he deduced from his vibrating hydrogen bubbles and the refracted and reflected light waves. Anyway, while plotting numerous combinations of harmonics a pattern started to emerge that blew my mind. There appeared to be the formation of a normal low frequency sine wave that was being chopped into regular occurring parts. These parts were created when large spikes of higher frequencies with fast rise times would shoot up and down from the ends of each part. As each succeeding harmonic was subtracted, the amplitude of the impulses became greater. I was not able to go beyond the 243rd

harmonic because of Mathcad's limitations in plotting points. Keely was dealing with very high frequencies, even though each individual harmonic at these frequencies was not very powerful by itself the combined harmonics I feel produce tremendous pulses that could rip apart most any substance. There appeared also a pattern of smoothing the chopped sine wave as the higher harmonics were being subtracted. You might be seeing these effects on your scope when testing the MRA circuit. The dual trace feature on the scope could be also causing trouble as already suggested. If it is, throw the dammed thing out and use a pendulum or a pair of divining rods! One thing that keeps popping up in Mrs. Moore's book on Keely is that Keely seemed to be using segmented silver, gold and platinum wires as well as some bar stock attached to his devices as band pass filters. This appeared to allow him to pass selected frequencies to various parts of his apparatus in the proper sequence. The idea that he produced all frequencies at the same time does not seem to be true. There appears to be a very definite sequence of frequencies applied that created the required harmonics. Those using sound boards in their computers should be aware by now that digital producing sine waves are really chunky when dealing with high frequencies. The Mathcad simulation that I use really brings this home when using less points. Great numbers of points are needed to produce the finer details that are required to observe some of the above sine wave chopping.

Message 10142 (12/22/94 21:28)
From: Bill Beaty
To: Norman Wootan
Subject: MRA

I wonder if your output rectifiers are a necessary part of the device? Have you tried running it with an AC output and using scope measurements? Might it still work?

Message 10144 (12/22/94 22:00)
From: Jerry Decker (Sysop)
To: Norman Wootan
Subject: (R) Capacitor Charging in MRA Field

Hi Norm ~ Sounds like a great experiment if there is truly a field present...it might even have time distortion effects as with the DePalma claims... since the Nieper and some of Townsend Brown's experiments also seemed to 'dilate' time...I never understood if it was TRULY a time dilation or simply an impeding effect on the mechanical clock mechanism and that might apply to digital also via electron flow quenching.... perhaps Joel's NEONDET circuit, using the neon to detect scalar type changes might be useful to 'scan' the area around the device while in operation...and that in turn leads to the gamma emission detector used by Joe Parr in his rotating pyramid experiments where the energy bubble 'grew' from the center of the King's chamber... lots of permutations.... it would make the most sense to stick with the normal measurements first, then go to the spook field theories... a capacitor, being a stressed dielectric might be an ideal collector of such aether interferences.... I really like Bills idea of scanning ley lines and generating some kind of map... I was just talking with Eric Duchaine from Canada and he mentioned that a geologist friend of his told him the ley lines of the planet are shifting from their position due to large crystal and other mining processes... We also discussed whether these were a MAN MADE GRID that was being disrupted by a lack of understanding or whether it was a

natural grid based on the earths own geometry.... and what would be the effects once it reached a certain point of anomaly... Eric is a storehouse of interesting information and a practicing acupuncturist who runs his own BBS...he is very with us in the same kinds of studies with an emphasis on Reich's Orgone... he is going to call Ronnie McWilliams about his radioactive element/orgone stimulation experiments... ~ Jerry

Message 10147 (12/23/94 01:16)
From: Joel McClain
To: Norman Wootan
Subject: 150 turn MRA test

Hi Norm ~ I tested the MRA which you made per the schematic with 150 turns on primary and secondary, on a single magnet. It checks out at 4.63 time unity. Also, I have observed the analog current meter reading lower with the MRA in the circuit than when it is out. Here's the data: (RMS)

Secondary output = 14.3VAC @ 600 ohms = 241mw for a net change in DC current to the amp of zero ma. Resistive equivalent on the output for zero ma change is 1300 ohms @ 9.75VAC output, so power = 52mw to the MRA. 241mw / 52mw = 4.63 gain.

When the freq was adjusted so that the output of the MRA was 12VAC @ 600 ohms, the input current to the amp decreased by 10ma. It is not possible to calculate gain because this is an effective output impedance greater than infinity. Supply voltage to the amp was 11.89 volts DC from a ten amp regulated supply and did not vary at all. Somehow, the MRA is increasing the impedance of the amp to the DC supply, possibly reducing the conduction of transistors. ~ Joel

Message 10149 (12/23/94 01:18)
From: Joel McClain
To: Bill Beaty
Subject: Diodes

Hi Bill ~ We used a bridge rect. but that was so we could get useful work out of the MRA, i.e., driving a motor, a fluorescent camping lantern, etc., but for measurement purposes, AC RMS is fine...it's sinusoidal output. ~ Joel

Message 10150 (12/23/94 01:40)
From: Bill Beaty
To: All
Subject: internet MRA

Sir ~ Is there a Email address to get to one of the original people who are working this device. There are a couple of concerns I feel that need to be addressed.....

1. MRA should be NMRA as what you maybe dealing with is Nuclear Magnetic Resonance Amplifier. As you are flipping the Magnetic fields in the magnetic core you are producing Energy; the question is at what cost. The following simple and inexpensive procedures may

answer a few questions and raise many more.
.
IF possible introduce a low level radio active material close to you device. The radium dial on a watch or any object that glows in the dark when exposed to sunlight or better yet a small amount of a radio active element... record radiation levels before and after a 24 hr exposure to device. In case of a glow in the dark element determine how long it will glow before exposure to device and than after exposure to device.

Next take 2 equal amounts of water...using one as a control expose the other to device… Have water checked by a chemist for changes...(extra elections or ions) or lack of also see if water is being broken down by electrochemical reaction with device....
.
It is my belief your device may have some rather interesting effects at low power levels and some very dangerous effects as size and power are increased... It is possible to upset the balance of matter only so far before things start to happen… Materials may start changing or in some cases start coming apart in unusual ways...This device may have applications in areas other than free energy which need to be explored and may hold even greater promise...Consider the possibility of reducing or using spent nuclear material or waste as a source of direct energy. Extracting the deadly radiation and turning it into electrical energy. This may also apply to complex chemical chains with high atomic numbers.
.
As has been observed and noted by a number of people who have written about there experience with this device on the internet...They feel that there is a field of influence around this object (flux fields, draws power from surrounding areas).

Message 10151 (12/23/94 01:42)
From: Bill Beaty
To: Norman Wootan
Subject: MRA testing

Here's a couple of suggestions off the internet:

Do you have measurements on the load and the current-sampling resistor values? Damn shame if they were mismarked and never checked. The circuit may be altered by connecting meters to it and throwing off the resonance peak. So, connect everything once and make simultaneous measurements.
.
If you have not done so, you could put the current-sample resistor in series with the oscillator output terminal that's grounded. Then you can ground the scope to the same terminal, use one channel to look at the other end of the resistor, and the other to look at the oscillator voltage. A separate instrument would still be needed to look at output voltage.
.
So, any luck with the duplicate versions?

Message 10153 (12/23/94 01:48)
From: Bill Beaty

To: Jerry Decker (Sysop)
Subject: internet arguments

So far it looks like arguing on the internet IS worthwhile. As soon as skeptics hear that actual oscilloscopes are being used, and that the output really is DC, they start asking where to get piezos! Also, the same people who are nasty on the public newsgroups come around later via private mail wanting more info on parts. Interesting...

Message 10156 (12/23/94 08:56)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ Please relay to John Brock on Internet the fact that since I am also experimenting with "Cold Fusion" and have been doing so since back in 1987 (before Pons & Fleischman), that I have already seen the corelationship with the "transmutation" that is occurring in the cold fusion cells that John Bockris down at A&M is most excited about. I have a Mills Nickel & Potassium Carbonate cell running that gets cooler as it runs instead of emitting heat as normal. If the cell is absorbing energy in an endothermic reaction then the only conclusion is that some sort of "transmutation is taking place. It is my intent to couple the MRA effect to the "cold Fusion" effect to determine exactly what you are implying about "sub atomic activity" that we cannot at this time understand much less detect. There is so much to be learned here that it exactly why Joel and I elected to go "Internet Public Domain" so that researchers all over the world could apply what we have only "skimmed the surface" on. The implications are more far reaching that any one person can conceive of. ~ Norm

Message 10160 (12/23/94 11:16)
From: Joel McClain
To: All
Subject: OHMS versus MHOS

Last night I left a message for Norm describing a decrease in current to an amplifier as having theoretical greater than infinity impedance for purposes of calculating power gain. That has been bugging me ever since, so I went back to the drawing board.

In MRA theory, the phase relationship of harmonics is used to reduce the current flow from the input source. This results in a nonlinear power in | power out relationship, or ratio. This is mentioned in the file MRA1.ASC here on KeelyNet. This is actually done by tuning the input frequency to the MRA for maximum AC output on its output terminals, then DEtuning the MRA for the most favorable power gain.

Detuning causes powerful harmonics to oppose the flow of input current, while continuing to contribute to the circulating current in the primary coil. This alters the EFFECTIVE impedance, and gives the MRA its gain. So far, so good. But what do we make of it when this effective impedance causes the input power of the amp to decline? The lowest level of input, in theory, is

in "standby" mode, with no load attached, so that in measurement terms, the amp "sees" a resistor of infinite ohms on its output.

Up until now, the signal input from the signal generator to the amp has not been given serious consideration because of its extremely low power, 0.1mw at the input of the amp. However, this signal biases the transistors in the amp. As the MRA's output power increases, the signal at the output of the sig gen also increases, indicating that the amp's input impedance increases directly with its input and output power. Detuning the MRA causes an exact reversal of this process. It was found that at 3.3VAC @ 600 ohms output from the MRA, the transistors are at only 55% conduction. So, it is not the power from the signal source that DIRECTLY affects output power, but the PHASE of the input relative to the reflected phase of the harmonics from the MRA that cause the reduction in input current to the amp.

I know that this is hard to visualize without the equipment sitting in front of you, but for those who will eventually build an MRA, this information may be useful. Now, how do we calculate gain when the input current to the amp decreases under the "load" of the MRA? We have to see the MRA as producing MHOS, the opposite of OHMS (yes, MHOS exist in theory... I'm not making this up). Due to the effects of interphase relationships, the load (MRA) crosses the line from being a load to being a source, and the extent to which it reduces amp power is gain IFF a corresponding output gain is seen or if the MRA output stays the same while input power decreases.

The MHOS from the MRA, by forcing the transistors to conduct below standby levels, are using power which is "borrowed" from the secondary circuit. The power at the secondary is not "free" just because the input power to the amp is less than standby. The output power of the MRA also drops, so there is no gain at this point. The reduced conduction below standby crosses a threshold where the harmonic content "cuts off its own nose" by reducing input power below the level where harmonics are beneficial, i.e., to the point where circulating current in the primary is reduced to a level which causes unity or less gain. Bad Mhos, bad...no dessert for you! Your comments are welcome. ~ Joel

Message 10162 (12/23/94 12:53)
From: Joel McClain
To: Bill Beaty
Subject: (R) internet MRA

Hi Bill ~ Yes, the MRA draws power from outside of itself. That is because the core is a magnet, and a magnet is in a constant state of collapse which is why it tries to "pull in" materials with similar lattice structures... to fill the energy void which was created when it was first magnetized.

The MRA allows the magnet to attempt to restore its matter/energy balance, or to demagnetize itself...slowly. We are resonating the magnet and it responds by collapsing energy into itself, via the coils which pick up this "surplus" energy and deliver it to a load.

The total energy drawn before the magnet is no longer a magnet will be less than the energy "stored" in its imbalance. If there was a "radioactive" reaction, it would have been immediate and very large in the original magnetization process, yet magnetizing is considered to be safe.

I think that the MRA would hurt you if you dropped it on your foot, but I'll let that assumption ride without empirical evidence. ~ Joel

Message 10164 (12/23/94 15:30)
From: Joel McClain
To: Norman Wootan
Subject: MRA Energy Pump Test

Hi Norm ~ I've stated here and in the MRA files that the MRA is an energy absorber, which we have seen evidenced, but which I can now prove. Set up your MRA in 85% mode, and let it "warm up". Then, reset the secondary output to half of the maximum output voltage by further detuning the input frequency.

Put an aluminum foil shield over it (I'm using an old pyramid made of kite sticks and foil). The output will go down as the shield keeps energy from getting to the MRA. Remove the shield, and the output goes right back up. Because aluminum is non-ferrous, the gain of the MRA can only be affected by the flow of energies external to the device. ~ Joel

Message 10165 (12/23/94 17:56)
From: Bill Beaty
To: All
Subject: Another MRA

I've put together an MRA circuit using a 4" speaker magnet and a 1.5" piezo slug. No o/u effects apparent yet. There is so voltage multiplication when it's run at the piezo resonance freq, but the throughput is only 50% at that point. It's worse at other frequencies. I find no electrical resonance of the magnet/coil, the only resonance is of the piezo. The piezo resonates at 55 Khz alone, 48 Khz when in the circuit. I wonder if something in particular is required to make this circuit go o/u. Maybe location? I hope the device still works when it's sent elsewhere for verification!
.
All the waveforms I've seen so far have almost no harmonics. My numbers come from Vpp readings off a scope, not from any DVMs. I'm awaiting some ceramic slab magnets from H&R, so I may still find out more. I wonder if the MRA requires its magnet to be free to acoustically resonate? If the coil is wound so as to dampen the vibration and sound, and if things like electrical tape are used improperly, the magnet won't vibrate. Will this mess things up?

Message 10172 (12/23/94 20:51)
From: Joel McClain
To: All
Subject: The 300 turn secondary and 60W bulbs

There was an error in message # 10148...the MRA tested today was made by Norm for test, and has a two to one step up ratio, i.e., 150 turns on the primary, 300 turns on the secondary. From what I can measure, this is superior to the original one-to-one ratio of the first MRA, which I wound to test theory. Makes sense though, because as the magnet inhales energy, the more secondary you have, the more energy will be collected for the load.

Also, have noticed that when light bulbs (ordinary 60W bulbs) blow, they do so with great vigor and a brighter than normal flash. The filament is exploded off of its posts, and flies around the inside of the bulb with enough force to leave striations on the glass.

In the past, I have associated this with an accumulation of virtual particles on the neutral lines of the house (from other experiments). This accumulation causes the lines to superconduct when a light switch is turned on, because the neutral is no longer neutral but at an elevated virtual potential. The effect is the same. ~ Joel

Message 10213 (12/26/94 19:56)
From: Joel McClain
To: Norman Wootan
Subject: Retesting for Motor Drive

Hi Norm ~ Went "back to basics" today, since everything had been put away (off the kitchen table) for Christmas. Retested the 2:1 MRA, and adjusted the input freq to give an even 40VAC across 600 ohms, and the input from the amp was 20VAC to the MRA primary. Disconnected the MRA from the amp and connected the amp to the decade box, and found that the equivalent resistance was 430 ohms. So...

MRA output = 40 / 600 = 0.067A X 40 = 2.67 X .707 = 1.89W
MRA input = 20 / 430 = 0.047A X 20 = 0.93 X .707 = 0.66W
Gain = 2.86 times unity

However, when the Pittman motor was connected, the piezo became more conductive, and the power gain dropped to unity or less, so I tried six other piezos to find one that would handle the motor load without breaking down...no luck. The first piezo had a lot of miles on it from other tests before we used it to run the motor, and these piezos are fairly new, so it may take a lot of conditioning before they can handle a motor, or maybe an oxide coating has to build up on the surfaces. If the load is too heavy, detuning has no effect.

The piezo that we sent to Walt wasn't "motor tested", so if he loads it very much, it will probably not make unity. However, under resistive loads such as today's test, it is fine. ~ Joel

Message 10214 (12/26/94 23:03)
From: Joel McClain
To: Norman Wootan
Subject: Back in Business...

Hi Norm ~ After trying six piezos, the seventh was good. It went through the resistive test better than the others, and on the DC motor, gave 3X gain, with 801mw in and 2.44W out. The input is AC RMS, and the output is DC. Not sure why the difference with this piezo, but will try to find out what is different about it. ~ Joel

Message 10215 (12/27/94 07:32)
From: Norman Wootan
To: James Johnson
Subject: MRA

James ~ Excellent report on the "sine wave chopping". See you are verifying exactly what I have been saying all along about trying to replicate "John Keely's" work with computer generated wave forms. It won't work for you have to have the purest sine wave that is obtainable to achieve the results we are looking for. The MRA circuit is the same effect, you have to use sine wave input to set up the dual resonance required in the piezo and magnet at 3 octave separation or you get "NO CIGAR". Thanks for the report. I am still looking for the "Hammond organ" sine wave generator before proceeding any further on the "water dissociation". ~ Norm

Message 10216 (12/27/94 07:38)
From: Norman Wootan
To: Joel McClain
Subject: MRA (Bill Beaty Version)

Joel ~ I set up Bill's MRA yesterday before leaving for San Antone to visit my son and daughter. It burned in from 8:00AM till 1:00AM this morning so it is well seasoned now for delivery to Bill. Will jot down the parameters so he won't have any trouble booting it off for his test. It is a carbon copy of the 12:1 I/O ratio for it has the 2:1 winding ratio like the last one I delivered to you. ~ Norm

Message 10218 (12/27/94 09:19)
From: Joel McClain
To: Norman Wootan
Subject: Oxide coating and solder

Hi Norm ~ Now that the MRA has been conditioned with the new piezo, the effective impedance of the circuit is slightly over 2500 ohms, and the power gain is 14.3, with the motor load. It came up within a half hour of powering it up...output and input voltages both climbing until the DC out was 15% less than max, while the voltage applied climbed until there was no drop across the MRA.

I used the decade box across the power in, and adjusted it until the input voltage was starting to drop, which was at 2500 ohms. It is now tuned and balanced at 33.83KHz.

The only difference with this piezo that is visible is in the method of soldering the leads. I dripped a ball of solder on each side, and there is flux around its edges on the piezo. I then tinned the leads and melted them into the solder balls. I think that this works because it doesn't break

through the oxide coating. Reminds me of Bearden's concept, the "old wire" idea... only works if you don't scrape through to the copper. ~ Joel

Message 10220 (12/27/94 15:04)
From: Joel McClain
To: Norman Wootan
Subject: Ultimate Test

Hi Norm ~ I just did the "ultimate" test of the MRA, proving that it is over unity even if you assume that the amplifier which feeds it is 100% efficient. I measured actual AC current to the amplifier, both with the MRA connected and disconnected. The difference at 120VAC is 12ma. This means that 12ma times 120VAC = 1.44W X .707 = 1.02W into the amplifier. The MRA is, at the same time, supplying DC output power to a motor of 12VDC at 140ma, for 1.68W.

So, even if you assume that the amplifier is 100% efficient, which it definitely is not, the MRA is still 61% over unity. This is a bottom line number to cut through the haze of "power factor" questions, and end the discussion of whether it is over unity, so we can determine exactly HOW MUCH it is over unity. I don't think that anyone will suggest that the Radio Shack amplifier is over unity, so the gain can only be coming from one place, and since it's DC off the bridge, it is true power. ~ Joel

Message 10221 (12/27/94 17:26)
From: Joel McClain
To: Norman Wootan
Subject: Addendum to Ultimate Test

Hi Norm ~ Went back as you suggested and checked the input from the sig gen to the amp. The output terminals of the sig gen have 1.27VAC across them and measuring the drop with a series resistor, there is .0013W from the sig gen. Actually, you can remove the sig gen return line and the MRA will stay in oscillation with no current from the sig gen except a few microamps of leakage current, as I found out as I was connecting the series non-inductive resistor. For all practical purposes, there is no power being added to the circuit from the sig gen. ~ Joel

Message 10235 (12/28/94 12:05)
From: Bill Beaty
To: Norman Wootan
Subject: mra measurements

This guy Bob Jewett on internet pointed out a measurement problem which I had not noticed. Voltage measurements across a resistor CANNOT be done as two measurements referenced to a third point if phase is variable. In some common resonant circuits, the voltage on either end of a resistor could be way out of phase with respect to common, yet the peak and the rms voltages on the resistor ends would be identical. So if you measure each end separately, you see the same voltage, and assume the current is zero. But if you measure ACROSS the resistor, you see a large (real) voltage, and discover the current is large. So, measurements must be done with a floating meter across the resistor, or with a dualtrace scope in differential mode and the two probes

placed across the resistor. Or you can always move the position of the resistor in the circuit so that one end is the same as the common point of all the test equipment, then measure from the common point to the 'high' side with less chance of mistakes caused by phase.

Message 10237 (12/28/94 13:23)
From: Joel McClain
To: Norman Wootan
Subject: MRA reduces AC line current

Hi Norm ~ I left the MRA on all night and ran the I/O test again, comparing the AC power into the amp with the DC power out of the MRA under a motor load.

The audio amp now draws 3ma LESS line current from the 120VAC input when the MRA is on the output of the amplifier. The motor is running along with 10.6VDC at 140ma of power from the MRA. The MRA is forcing the amp's transistors out of conduction, which is seen by the line input as a lower load requirement to the power supply of the amp, or basically as a higher resistance to input current. This means that the MRA is producing Mhos, which it could be using for its own circulating current, but instead is using to drive down current from the amp.

I compared this with the Universal Resonance Curve for series resonant circuits by first changing the input freq until the MRA was out of resonance, then bringing it to full output, then reducing the gain by increasing the frequency. The MRA, out of resonance, causes a 3ma increase in line current just by being connected to the amp.

As a series resonant circuit, the MRA has theoretical zero impedance (limited to copper loss) at peak resonance, which is its max power output point. DEtuning the MRA by increasing the frequency should decrease the input current, which it does. However, at the 65% point of relative resonance, which is where it is now, the resonance curve intersects with the phase angle of applied current from the amp.

This is the "knee" of the input current phase angle rise. The current should continue to rise, but is being forced down by the harmonic content of the MRA at resonance, as seen by the decrease in input current to the amplifier... not just below the non-resonant load of the MRA, but below no-load. ~ Joel

Message 10238 (12/28/94 14:12)
From: Joel McClain
To: Bill Beaty
Subject: (R) mra measurements

Hi Bill ~ We have tried both methods of measurement, and the problem which we have is that there is very high voltage multiplication across both elements of the series resonant circuit. We are dealing with typical Q's of over 100, which is normal in a series resonant circuit, but which make a voltage drop measurement meaningless. So, we measure the equivalent load using a precision decade box, or as most recently we measure the delta in input power to the audio amp, which will decrease under the output load of the MRA at 65% of the resonant peak. Phase isn't

just variable, it's 180 degrees out relative to the
individual components.

No matter where you put a resistor in the series resonant circuit, you will measure a drop which is the result of multiplied voltage. But you can't fool a decade box. When you remove the MRA and put the decade box in its place, and set the resistors to give the same delta in applied voltage, you know EXACTLY how much current is being drawn. If you use a current probe, which we have also done, you also see the multiplied voltage, because the pickup of the probe is a coil. I would think that, based upon his question, Bob Jewett is aware of these considerations. His assumption that you will see a high voltage drop is correct, because you are measuring the difference in multiplied voltages... now IF you want to relate this to actual INPUT voltage, divide this drop by the multiplication factor of the circuit, and you will have the voltage which you can use for current measurement, and which agrees exactly with the decade box.

You can prove this with any series resonant circuit, it doesn't have to be the MRA. ~ Joel

Message 10242 (12/28/94 15:45)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ Sure sounds like you have been busy nailing this beast down. I built another 2:1 for Bill and will visit later to discuss the other test. Everyone is asking the right questions for which we already have "plowed the ground" so have some answers. You know I "pinch" myself all the time and ask "is this really happening?". Verification is the answer to all the questions. ~ Norm

Message 10243 (12/28/94 18:15)
From: Joel McClain
To: Bill Beaty
Subject: Drop current and decade current

Hi Bill ~ Here's some numbers taken from actual measurement to help define the primary current drawn by the MRA.

Voltage applied from amplifier = 23.38VAC
Equivalent resistance measurement = 500 ohms
Current = E divided by R = 0.0468 amperes
Series drop across 2 ohm resistor = .380VAC

Voltage multiplication = 4 times input voltage in the series circuit (Note: Combined voltages across piezo and primary = four times the voltage applied by the amplifier. If we're going to apply the current derived by the drop to input voltage for power, then it must be the ratio of the input voltage, not the multiplied voltage.)

Voltage of .380VAC divided by 4 = .095VAC
Current = .095VAC divided by 2 ohms = .0475 amperes

Power in either case is equal to 23.38VAC times 0.47 = 1.098W
RMS power = 1.098W times 0.707 = 0.777W
Measured output from the MRA is 18.4VDC times 0.140 = 2.576W
Power gain = 3.32 times unity.

I don't know what else to do, or what other test to perform at this point, so I'll stop here unless someone can suggest something. If reducing AC line current in the previous test wasn't enough, then I guess nothing ever will be for the "eternal skeptics" on the I-Net. ~ Joel

Message 10253 (12/29/94 06:24)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ After successfully running the MRA on 12 Dec. Joel and I video taped the original prototype running on his table and driving two loads i.e., light bulbs and DC motors at the same time so that no one could say that this was RF as we have seen when experimenters run small neon tubes. The video of course has date time stamps on the footage. This is normal and prudent procedures when establishing time and place of invention. I have had so many calls now requesting magnets and piezo's that I cannot possibly supply them. I spent about 3 hours on the phone yesterday talking to people across this country re-MRA. The biggest problem that I have encountered is the fact that all who have called have only the original MRA.ASC file and do not have the MRA1.ASC and the most important RULE9.ASC. Without the Rule9.ASC they do not have the theory that makes the MRA possible. Copies of the MRA.ASC are being sent all over this country to friends and other researchers without the RULE9.ASC. Are you posting the MRA (public "A") messages to Internet each day so that there is a constant up-date as to progress? ~ Norm

Message 10254 (12/29/94 06:36)
From: Norman Wootan
To: Joel McClain
Subject: MRA (Power Test)

Joel ~ I have been putting a lot of thought into the high power test of the MRA device. Since you have determined that the circuit is creating what we call Mhos and usually this phenomenon is associated with vacuum tubes in operation and going back to the work of T. Henry Moray with his "valve" then I am setting up this 250 watt tube power amp for the ultimate test. Since transistors seem to not be able to take the bucking effect of the "first harmonic" check in the input current into the circuit we should use the vacuum tube for this final stage of signal injection into the MRA series resonant primary. The "finals" tubes then are basically in the series circuit and will survive the punishment brought on by the "hammering" effect of the first harmonic. These large output tubes will display more of your "Mhos" effect than simple transistors. I still believe, (I keep dreaming about it) that the vacuum tube should play a part in the circuit as a "coherer" of the ZPE into the circuit. Certainly worth trying for we are at the point where we need to push the piezo's at their design power ratings of 50 watts at 150 Volts. There will be some serious voltages developed in the series resonant primary for we have already seen nearly

1000 Volts circulating with only 20 volts of primary input. A vacuum tube is the only animal that could survive the punishment in a high voltage circuit like this. Bob Paddock's indestructible transistors won't cut it in this harsh environment. Thoughts and ideas. ~ Norm

Message 10257 (12/29/94 10:22)
From: Joel McClain
To: Bill Beaty
Subject: Testing, 1-2-3

Hi Bill ~ You made a suggestion a while back about going into the amplifier output section and measuring current from an isolated point. That was done this morning, measuring both voltage and current into and out of the isolation transformer. It was easy, because the xfmr leads are wire wrapped to pins on top of the pcb.

The input to the isolation transformer is consuming 2.4 watts, and the output is measuring 1.9 watts, while the MRA is providing 2.3 watts, which is less than the input to the isolation transformer, but more than the output. Since the secondary of the isolation transformer is part of the "voltage multiplied" primary of the MRA, its power at 1.9 watts may be overstated... but regardless, the MRA output is above it by 26%, and that is DC, after a bridge rectifier. MRA primary current was decreasing while the secondary output was increasing, but I took a reading rather than wait all day to see exactly where it would go.

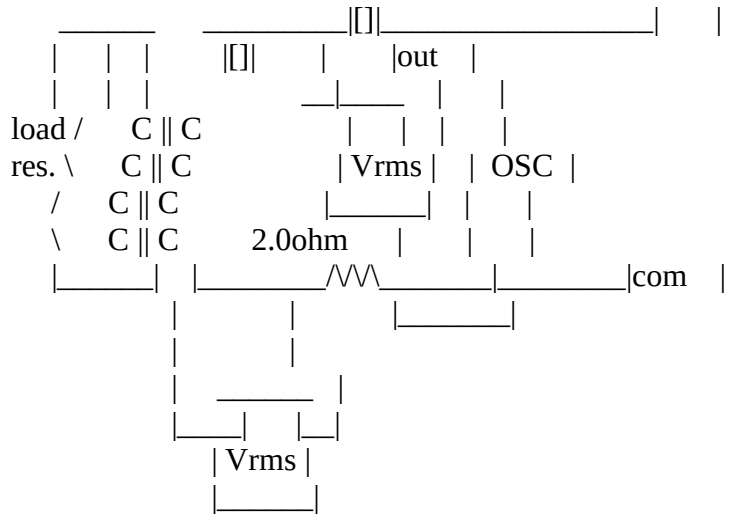
Increasing power to the MRA (went up to 20VDC out on a 19.1VDC rated motor) increased the ratio to 30%. What this is saying is that the gain of the MRA is high enough so that it doesn't matter whether you measure primary current direct in-line across multiplied voltage... it's still over unity. Now I really don't know what to test next. Suggestions? ~ Joel

Message 10261 (12/29/94 14:30)
From: Norman Wootan
To: Joel McClain
Subject: MRA (Power Test)

Joel ~ Do you think I'm crazy? I had no intention to just turn the switch on a 250 Watt amp driving the piezo. What I said is that we need to substitute a vacuum tube amp in the circuit instead of the puny transistors we are now using so we can proceed in the power test. I like you agree with caution on something we are not really sure of the true nature of the beast. Don't worry, there is no intention of running very significant amounts of power at this time. ~ Norm

Message 10265 (12/29/94 20:30)
From: Bill Beaty
To: All
Subject: MRA measurements

Norm and Joel ~ About the current-sensing resistor position, I mean you should try connecting it like this:
coils/ magnet piezo _____



.

Even if the whole circuit is floating, the oscillator's 'common' terminal will act as a reference point, and the high voltages across the piezo and magnet then should not mess up the input measurements. Simply multiply the two RMS voltage readings, divide by 2.0 ohms, and you'll know the worst case input power (as close as the RMS meter can tell you, that is.) If you've already tried the above measurement, does it give overunity numbers? If it won't, then there may be something screwy with the other measurements. I would trust the above setup. If a dual-channel scope is substituted for the RMS meters (with the scope's common lead going to the oscillator common terminal) you should be able to see the current and voltage waveforms at the same time, so phase can be observed directly, ending lots of arguments. Whaddaya think? ~ Bill

Message 10267 (12/29/94 23:00)
From: Joel McClain
To: Norman Wootan
Subject: W. Rosenthal called...

Hi Norm ~ Walter Rosenthal says that the effect of watches running slow in the vicinity of ZPE devices is well known, and says that Tom Bearden can describe it better than anybody. I faxed Walt the most recent message base test data. We also talked about possibly using the MRA as an earthquake warning device, so he may keep it after the tests to try it for that purpose.

He also said that the method of attaching leads to the piezo is very important, and that attaching them closer to the hole would be better because the effect is like putting your hand on a bell... you muffle the sound more as you get further toward the outer edges. ~ Joel

Message 10269 (12/30/94 09:48)
From: Joel McClain
To: Bill Beaty
Subject: (R) MRA measurements

Hi Bill ~ Thank you for the diagram. I'm going to tell you some things in this message which will make no sense to you in terms of conventional electronics... but I've put in close to 90 test hours with the MRA so far, and these are reproducible constants for the circuit.

Tom Bearden has been quoted as saying "... think backwards" when you are dealing with devices of this type, and in many ways this is true. The MRA primary is a Tesla coil which is being fed by the matching xfmr secondary of the signal generator. As with any Tesla coil, there is voltage multiplication, and this appears across every element of the completed primary circuit, including the signal generator's output xfmr secondary.

Because of this, you will measure a voltage across the signal generator output secondary which is higher under load than it is at no-load. In a conventional xfmr, this is not possible.

After you turn on the MRA, and for a period of hours afterwards, you will see the DC output climb in increments while the MRA primary current drops in increments and the signal generator output secondary voltage goes above no-load. This is the opposite of a normal power supply.

If you add a resistor anywhere in the MRA primary circuit, the primary current will increase... also the opposite of a typical transformer, where resistors are used to decrease current. While the primary current is increasing, the output DC is dropping, also the opposite of what you would expect.

The MRA can be tuned to drive down AC line current below no-load, and still produce usable power. As far as primary current, the only way that I've been able to measure it is inline, with a meter that has a freq range of 200KHz, and even the tiny voltage drop of the inline meter will increase current and lower output DC.

Very few of the "old rules" apply in a circuit which is adding power to the applied power at resonance. It's like having an external power source in the middle of the circuit, and in fact, that is what you have. The piezo is adding free electrons and the magnet is acting like a generator, and the combination equals unity plus.

You will have to see this for yourself... I still do, every day in fact just to make sure it's real. It is. Have fun! ~ Joel

Message 10271 (12/30/94 13:06)
From: Joel McClain
To: Norman Wootan
Subject: Cool Current

Hi Norm ~ Tom Bearden and others have reported the effect of "cold current" in free energy devices, and so the question comes up regarding the MRA, "where's the cold current?" I've taken the MRA's temperature at all inputs and outputs, and everything is 5-10 degrees warmer than ambient air, except for one place. There is one place where the temp is the same as ambient, and it is a path in the series circuit which should read warmer, like all of the other paths... so, there is some cooling, but not a lot of it under low level input and output.

That location is the wires connecting the piezo to the primary, which should be as warm as the other wires in the series circuit, but these wires stay at room temp. That is the location where we should see "blue light" on camera film. Now that Tom has seen the schematic, if we ask him where we should see it, I bet he'll know. ~ Joel

Message 10297 (12/31/94 10:48)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ Your complete MRA is on the way and should be there by Monday. I downloaded the Internet traffic and saw so much "negative energy" being expended out there trying to discredit something that we offered up in the "Public Domain" for other researchers to take a serious look at. The first counter statement that I will make is that Joel and I agreed that we will not sell or accept any re-imbursement of any kind for anything connected with the MRA device for the very reason sited in the message traffic. No I will not sell off my small stock of transducers. I will give magnets and transducers only to serious researchers for the purpose of circuit Over-unity output verification. We are not seeking any profit from this device thus the reason for offering it as "public domain". If those out there are so narrow minded that they will not analyze the circuit for what it does, so be it. They are beyond help. To those who question why we have not "self powered" the device, we are working on the voltage regulator, oscillator and power driver circuit that will make this possible. Everyone thinks this can be done overnight --- "wrong" --- things don't happen that fast. Our intent was to get the fundamentals out for all to see and experiment with. The most important document in the MRA project is the RULE9.ASC file which explains the fundamental theory behind the MRA principle. I will be putting out a paper shortly explaining what is going on in the Griggs and Perkins Hydrosonic Pump for it is directly tied in to the MRA in principle of operation and ZPE tapping effects. More on that later. As to the critics out there saying that measurements of input power are defective. This is what we currently have at our disposal on our work benches between Joel and myself. 2 ea. General Radio Precision Decade Resistor Boxes, 3 ea. Techtronic 465 Dual Trace Scopes, 2 ea. Fluke 87 true RMS meters, 1 ea. P6042 Current Probe, 2 ea P6021 Current Probes, 1 Wavetek 164 Sig Gen, 1 ea BK Precision E310B Sig Gen, 1 ea. HP 200 CD Sig Gen, 1 HP 5383 Freq Counter, 2 ea Simpson Freq Counters, 1ea. Wavetek DM 27X7 meter & freq counter, and a whole bunch of the old analog Simpson and Tripplet meters that have been cast aside with the coming of the digital world. I realize that we do not have the sophisticated equipment that you would find in an industrial or university lab but it gives us a good idea as to what is fact or fiction. We have the circuit out being tested by those that do have the latest state-of-the-art equipment so time will tell all. Be patient is all I have to say for now. In time the truth will be known to all. ~ Norm

Message 10301 (12/31/94 12:11)
From: Bob Paddock
To: Joel McClain
Subject: (R) MRA reduces AC line current

This means that the MRA is producing Mhos, which it could be using for its own circulating current, but instead is using to drive down current from the amp. I almost fell on the floor when I

read "producing Mhos". Lecture Mode On: Nothing "produces" Mhos. Mhos are now called Siemens, and given the unit S. [Personally I liked the humor of Mhos (Ohms backwards)]. Mhos are the 'reciprocal' (mathematical opposite) of Ohms.

R = 1/G or G=1/R
Where R = Resistance in Ohms
G = Conductance in Siemens (Mhos)

Conductance and Resistance refer to the same thing but from opposite viewpoints. While Resistance is the Resistance to current flow, Conductance is the allowance of current flow; zero conductance = infinite resistance.

I'm sure you've calculated the total resistance (Rt) of a number of resistors in parallel using this formula:

Rt = 1/(1/R1 + 1/R2 + 1/R3 .... + 1/Rx)

What you are really doing is adding the resistors Conductance values together as if the resisters where in series. Then converting the series Conductance value back into the parallel resistance with the finial 1/(). Also in this inverted world live: Susceptance, B, the reciprocal of (1/X) and, Admittance, Y, the reciprocal of impedance (1/Z). People at work tell me I have a warped perspective, and tend to look at things backwards [I look at it as turning a negative in to a positive or a 'feature']. Also while I'm in this lecturing mode (I don't like it) is this .707 thing: .707 has NOTHING, ZIP, NO'DA, to do with Power Factor, as I explained in one of my previous messages to Norm. .707 has to do with converting *PURE* sine waves in to the work equivalent of DC (RMS). You keep talking about harmonics so I assume that you don't have *PURE* sine waves? I don't like coming across as the heavy here all of the time, but if you want to be taken seriously by The Rest Of the World then we all need to be on the Their program.... Even if They don't get it... Lecture Mode Off.

Message 10302 (12/31/94 12:13)
From: Bob Paddock
To: Joel McClain
Subject: (R) Drop current and decade current

I don't know what else to do, or what other test to perform at this point, so I'll stop here unless someone can suggest something. A heat based power meter, or better yet a Calorimeter. If reducing AC line current in the previous test wasn't enough, then I guess nothing ever will be for the "eternal skeptics" on the I-Net. Don't waste time/energy on the 'eternal skeptics' they'll die off and a new breed will grow up in their place that 'Get It'.

Message 10303 (12/31/94 12:15)
From: Bob Paddock
To: Norman Wootan
Subject: (R) MRA (Power Test)

Since you have determined that the circuit is creating what we call Mhos and usually this phenomenon is associated with vaccuum tubes in operation. You are thinking of Transconductance (gm [small G with small subscript m]), also known as Mutual Conductance. There are several people that make Transconductance IC's now (Maxim and Harris for two; good into the hundreds of megahertz). In a given tube, if Eg varies by some amount the Ip will vary by a certain amount. Tubes having the ability of producing a relatively wide Ip variation with a given Eg variation have high values of transconductance. Gm = DIp / DEg (Should be small letters with a subscript)
u = dEp / dEg
gm = u/rp

Where gm = transconductanc in siemens (mhos)
u = amplification factor
rp = ac plate impedance

Transconductance (gm) also shows up in JFETs; its ability to vary the output current, Id, when an input-voltage variation is applied (some times this is called forward transadmittance, yf or gf (small y/small g subscript f).
gm = (DELTA id/DELTA Vgs) | Vds constant

No magic in the math here... A vacuum tube is the only animal that could survive the punishment in a high voltage circuit like this. Bob Paddock's indestructible transistors won't cut it in this harsh environment. You're right a normal transistor would never survive this, but check out the IGBT's and MCTs in that Harris book. 1200 volts is no problem. International Rectifier also has some MOSFETs that get up in the 1000+ range, and Motorola's HDTMOS are getting close. I like the TMOS ones myself. Make sure you use the ones with the Kalvonic contact current sense to simplify your measurements and feedback control. Also you have to watch the dv/dt and di/dt not just the voltage.

Message 10307 (12/31/94 14:13)
From: Joel McClain
To: All
Subject: MRA I/O Ratios
Test date: 12-31-94

To measure apples against apples, I've tested the MRA at both of the output levels which are important, Maximum Power and Maximum Gain, using the resistive equivalent load method. The measurements were made to attain the same signal source voltage drop as when the MRA is in the circuit as well as to measure the current in series with the decade box at those voltage drops.

The applied voltage is 23.75VAC from a signal source. At Maximum Power, this voltage dropped to 21.9VAC. At Maximum gain, it dropped to 23.25VAC. At Maximum Power, the equivalent resistance to obtain a signal voltage drop to 21.9VAC is 165 ohms, and the measured current is 132ma. At Maximum Gain, the equivalent resistance to obtain a signal voltage drop to 23.25VAC is 595 ohms, and the measured current is 40ma. Input power is calculated using the

above measurements to be 2.04W RMS at Maximum Power, and 658mw RMS at Maximum Gain.

The output power for this test was in rectified and filtered DC voltage applied across a running motor which drew 140ma of current.

At Maximum Power, the output voltage w 18.38VDC, and power was therefore 2.57W. This is a gain of .53W, or 1.26 times unity.

At Maximum Gain, the output voltage was 15.5VDC, and power was therefore 2.17W. This is a gain of 1.51W, or 3.30 times unity.

The measurements were made in the linear output region of the signal source, where variations in the resistive values, either higher or lower, would cause corresponding changes in applied voltage and series current. The pattern of current increases and decreases is the same as is seen when "live" measurements are taken in the MRA primary circuit. However, the live measurements in the circuit when it is reactive and therefore has multiplied voltages present do not conform to Ohm's Law, and are not considered to be reliable.

Any losses which occur as a result of rectifying and filtering the AC to DC are considered as a "cost of doing business", because DC is useful for powering a load, and 34KHz is not. Therefore, these losses are not factored into the power gain measurement. ~ Joel

Message 10308 (12/31/94 14:14)
From: Joel McClain
To: Norman Wootan
Subject: Call & Fax from Tom Bearden

Hi Norm ~ Tom Bearden sent a fax (11 pages) explaining much of the effects of the MRA in terms of Whittaker waves and how this is causing phase conjugate pump waves to "slip in" hyper 3-space (aetheric) energy. Because of the materials in the MRA and the use of three octaves of resonance, he says that the over unity effect is unavoidable. Many other circuits can be made using the same principles, but the difference with the MRA is that the energy is CONTROLLED and producing work.

I called him back... I still haven't read all of the fax... and we talked for a while. I want him to have the MRA that I'm using for test now as his evaluation unit, and he will get it certified by "recognized" members of the scientific community. Next time you come over, we'll pack it up and send it to him. ~ Joel

Message 10311 (12/31/94 14:29)
From: Bill Beaty
To: Joel McClain
Subject: (R) Testing, 1-2-3

That's excellent news on the MRA gain measurements. I am very unsure about this voltage multiplying effect as applied to any series resistors or components within the oscillator. In a series-resonant circuit, the voltage across the coil and capacitor will build up hugely because of resonant energy storage, but this will not affect the voltage across the current-sampling resistor or across the driving oscillator, or across the current probe coil (unless the probe coil has a resonant frequency the same as the MRA.) But then again, o/u physics could do all kinds of unexpected things. It sure would be strange if o/u devices are common, but their effects make measurement devices read incorrectly and underestimate actual energy "creation."
.
The only true way to prove that the device works is to make it function as a self-acting black box. If the o/u percentage is high enough, the power amp could be driven from the DC out of the MRA. Or, as someone on the Net suggested, you could connect the MRA output to a 120vac inverter, and feed that back to normal 120v drive equipment. Big losses via inverter efficiency though. It definitely should be possible to build a custom amp/oscillator having very low supply requirements, so that even a low o/u percentage could be made into a self-sustaining energy source. Until this is done, there is a chance that we are all fooling ourselves. The slowing wristwatches and the self-oscillation Norm observed are very good signs this is real.

Message 10313 (12/31/94 15:37)
From: Joel McClain
To: Bob Paddock
Subject: Your Messages

Hi Bob ~ I'll try to answer all of your messages... very thoughtful stuff, and I appreciate the time you've put into them.

Mhos...hmmm...well, per the books, it was the closest thing I could find to describe the effect... ok, I'll call it by it's proper name: "energy density and energy transport in bidirectional EM wave flux to create massless displacement current via hidden channel (Whittaker Field) phase conjugate pumping"

Call me old fashioned, but I really prefer the humble Mho to describe the effect... I can wrap my brain around a Mho, but it's still stretching AWFULLY hard to get around that other stuff....

The sig gen is grounded, but its output is off of an isolation xfmr, and the amp is ungrounded... btw, the frequency of oscillation jumps up one octave to over 66KHz when you remove the signal return lead from the sig gen and let it run open.

Thank you for clearing up the power factor "cosine of theta" stuff. It's good confirmation, since we are comparing the input power with output DC from a bridge rectifier... apples with apples. ~ Joel

Message 10343 (01/02/95 08:40)
From: Ben Cobb
To: All
Subject: MRA Other ways?

I came here from the Inet, even though Bill is doing a good job of putting the information up there, he doesn't seem to be getting the messages (the serious, constructive ones) back to you guys, so I have to pay for the LD call. Hope Bill will hear this and change his ways, anyway Bill, I do enjoy your WWW page, keep up the good work.

Guys, Please, Please... Try taking one of your prototypes and put a coil around the magnet to make it "move" like the peizo does. What I mean is to hang the magnet somehow (with string, rubber bands?) in the middle of a coil so that you can "modulate" it with this coil. This coil would NOT CONTACT the magnet, as your other ones do. This may save you the problems of the Peizo feedback and such... please try it and let me know what happens. I am serious, what would it hurt? Why wouldn't some other sort of stimulation at that frequency work? The idea is to move the magnet at that frequency isn't it?

Also, before you guys go for the "big power" driving this circuit, you better tie it to the bench... Just a warning because this has been done before, and it damaged some equipment real bad.... (a big test)

Message 10346 (01/02/95 11:50)
From: Joel McClain
To: All
Subject: MRA Tech Note

Here's another tech. note which may be useful for experimenters who choose to build and test their own MRA. Because we are resonating both the piezo and the magnet physically, it is important that the MRA is not left in a very cold environment before use. I put one out in a cold garage (well below freezing) for two days, and found that the magnet is slow to warm up, and as a result, the DC output voltage is under 80% of where it was when the MRA was at room temperature. Also, it will not detune properly when it is cold. In other words, it behaves like an ordinary series resonant circuit. Actually, I think it's more like the effect a cold car battery, which loses efficiency when it is cold.

If your MRA, particularly the magnet, gets cold, let it warm up overnight before you use it. These are big magnets, and it takes a long time for them to warm up. Even when the surface temperature is warm, the magnet is cold inside, and it takes time for it to transfer heat. ~ Joel

Message 10348 (01/02/95 13:11)
From: Norman Wootan
To: Ben Cobb
Subject: MRA Other Ways

Ben: thanks for the input on suspending the magnet material inside a coil so that it is totally free to oscillate or resonate at what ever freq that "shakes out". We have had several Keely-Netters suggest the same thing but have not gotten around to that phase of testing. We have had a suggestion that there may be a "light" interface also that we have not investigated. To show that you input is valued, I have just finished winding a 4" diameter air core coil so we can suspend the magnet inside of same so as to be free to resonate. Now the trick, "some experimenting here"

is to find the best method of suspension. I keep thinking about the "chime bar in the ordinary door chime" method of suspension. Support at the "node points" is the terminology therefore we don't interfere with the resonance or attenuate it. I will get back to you after we have done some testing on this approach. I will deliver this set up to Joel so he can run it through its paces. I want to build one that is a full-blown Tesla coil with a design freq of 174.9 KHZ so we can couple directly with the earth's natural ferro-magnetic frequency. This approach keeps coming back to "haunt me for some reason so why not pursue it. More later. Thanks again. ~ Norm

Message 10350 (01/02/95 14:38)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill: We all get criticism from all directions when we attempt to inform the world of new and exciting energy info. We value your part in this endeavor (Internet interface and "E" researcher) and look forward to reading all feed back from the "big Net" (Can you really talk to GOD on the Internet ?). I know that there is a lot of positive support out there for I have been receiving calls from some very interesting Engineers working behind "high security" doors for some top defense and industrial contractors who are really pushing the state of the art in electronics research. All have said "congratulations for sharing what you are learning" for this is the only way the word can get out of a very tight circle of research. The ones out there shouting the "negatives" are really eaten up with the idea of "free energy" or a new form of energy but have not been able to envision the correct approach. Keep the words flowing (both ways) so we can feel the "pulse" of that other world called "ACADEMIA". ~ Norm

Message 10352 (01/03/95 06:48)
From: Bob Paddock
To: Joel McClain
Subject: (R) MRA measurements

The piezo is adding free electrons and the magnet is acting like a generator, and the combination equals unity plus. This reminds me of Joe Newman's idea where the mass of the wire is converted to energy via E = M(C*C). Have you ever put the MRA on a balance scale (A Hooks Law scale might be upset via the operation of the MRA, see the work of G. Hodowanec, the Gravity Wave Guy)? Is it losing mass at almost immeasurably small rate while operating?

Message 10354 (01/03/95 06:51)
From: Bob Paddock
To: Joel McClain
Subject: (R) Your Messages

Mhos...hmmm...well, per the books, it was the closest thing I could find to describe the effect...ok, I'll call it by it's proper name: "energy density and energy transport in bidirectional EM wave flux to create massless displacement current via hidden channel (Whittaker Field) phase conjugate pumping"… I think I get it now (?). By your use of the term Mhos, I think you are implying Negative Resistance (Negative power creation), which is entirely different than

Conductance (measured in the units Mhos). Sometimes my "education" gets in the way the Mhos being a case in point. Can we come up with a term for Negative Resistance, and Negative Power, and avoid the use of Mhos so as not to confuse others? Also "Displacement Current" has a text book meaning and a "Free Energy" meaning… what do we do there? Tunnel Diodes exhibit Negative Resistance. Lambda Diodes also do too. Tunnel Diodes are expensive these days ($50+). But you can make a Lambda Diode out of back to back P and N JFETs, connect all like leads together (gate to gate, etc). Also the "Black Hole Antenna" work of Sutton, where he synthesizes -L/-R/-C. The problem here is that none of these really have much to do with Free Energy. So where does that leave us? I've read Whittakers papers, but the math in them is far beyond my abilities today. What I got out of them was that Whittaker showed than any Hertzen Wave (Transverse Vector Wave) could be broken down into its component Scalar Waves. How does this relate to the MRA? I've never quite "Got It" with the phase conjugate pumping stuff yet, time for more study. The timeless (-t) reflection back to the source point always seemed like a fun way to Zap the Zappers....

Ok I've went and dug up Physics Today/April 1981 "Applications of optical phase conjugation" by Concetto R. Guiliano [Has excellent references listed at the end for anyone that's interested]. Am I correct in assuming that the MRA is acting as the pilot/reference path, and that Aether is acting as the conjugator/source? Still feel I'm missing a connection here, I'll go dig out Bearden's books....

Message 10359 (01/03/95 09:10)
From: Joel McClain
To: All
Subject: MRA Tech Note - Wire

From the coils which Norm and I have wound so far, it appears that 22 gauge stranded wire is the best choice. Also, we've experimented with different turns ratios, and a step down to the secondary of two to one, with 300 turns on the primary and 150 turns on the secondary gives good gain ratios, and detunes very well.

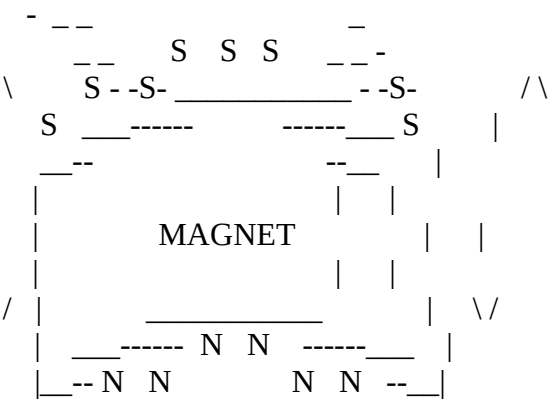
However, the transformer was originally wound as a step-up, so the primary is actually on the outside of the secondary, but we don't know yet if this is the best way to do it. Time and more experiments will tell. We do know that solid wire doesn't work. It will likely take a few months before we have collected enough data to recommend an absolute best design. ~ Joel

Message 10361 (01/03/95 10:03)
From: Bill Beaty
To: All
Subject: MRA

I just received parts from H&R, so I'll be able to try building a version with these other parts using Norm's device as a guide. If it works, then we'll have (temporarily) a parts source to recommend. The piezos are less than 1/4" thick. The ceramic magnets are 1" thick slabs with poles on the faces, but they have TWO poles on the faces rather than one big one. Yet another

change to try. Multiple poles might make the magnet vibrate harder with smaller input, but the poles/coils pattern has to be just right to do this.

Message 10363 (01/03/95 10:05)
From: Bill Beaty
To: All
Subject: MRA/Sweet coil



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If the magnet block is magnetized as above, and vibrates in a bending mode as above, then it's possible that the reports of Sweet's "scalar" coil windings are not scalar at all. If you want to make a magnet vibrate transversly as shown, you should wind two coils, one towards each end, then connect them so the field polarity from the coils is pushing each other, so you end up with a tripole N-S-N pattern. When you power such a thing with AC, the center of the slab magnet will be pushed one way, the ends the other, and the magnet will vibrate transversely (microscopically) like a plucked string.
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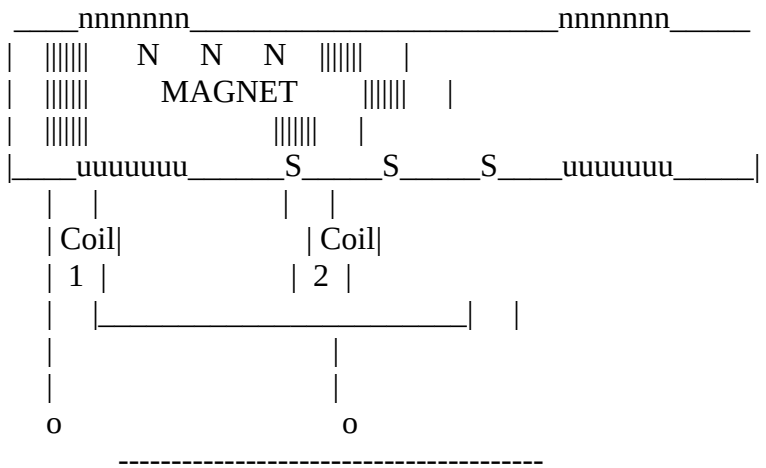


Message 10365 (01/03/95 11:03)
From : Joel McClain
To: Bob Paddock
Subject: Mo' on Mhos

Hi Bob ~ When the MRA was designed, the intent was to create and above unity device based upon earth itself... its magnetic fields and frequencies. We've since seen that it is directionally sensitive to earth magnetic fields, and that it "responds" to sunrise and sunset. For all practical purposes, the MRA at resonance is like a funnel with a vacuum device attached to the narrow end, collecting energy which becomes more condensed as it travels into the funnel, where it is trapped in the windings of the transformer by the collapsing magnetic fields.

This then represents an excess potential, which we see when the signal input voltage is higher under load of the MRA than it is under no-load conditions. We also see this when we can reduce the entire AC power to the signal source below no-load, while at the same time producing usable power from the MRA.

According to scalar theory, the excess potential is a quantum voltage potential which reacts according to known non-linear optical (NLO) laws of physics. Because the Coulomb gauge transverse potential (CTP) exists in all of space-time (also standard physics), small amounts of excess potential occur naturally in all semiconductors. This interferes with applied EM potential, and causes "noise", which is normally filtered out. Thus, semiconductors are natural scalar interferometers which translate low level amounts of excess potential.

When two or more semiconductors are connected, directly or indirectly in a conductive path, a hyperspatial link is formed and the translated excess potential will bounce back and forth between them within this link, which can produce laser beams. Or, the energy may reach the level sufficient to destroy one or more devices, or to destroy the semiconductors in the test equipment attached to the circuit. This is fully documented in the Lawandy experiment at Brown University and described in the March 31, 1994 issue of Nature Magazine. A "ping pong" effect occurs with semiconductors which have "self-targeted" each other, creating spurious bursts of normal EM energy. Credit for all of the above information to Tom Bearden, who kindly provided it after years of study and research.

Now we have two "theories" to describe one effect (likely there will be many more) so we have to find one that works, in terms of being consistent and reproducible. It is, I believe, both. The "earth" theory is the "outer" or normal EM description, since we are dealing with EM to drive a motor load. The Bearden theory is the "inner" description, and provides mathematical exactness to the process. We used the "outer" theory to find the lattice structures, resonant octave ranges and LC relationship of the MRA. That still leaves us with the unseen mechanism by which excess potential is realized in the circuit. That is where Bearden's "inner channel" theory fills the void in understanding with clarity and precision.

It is really neither Mhos nor negative resistance as I understand it, but the translation of low-level CTP energies into usable EM. The aspect of the MRA which is unique is that it traps this potential and puts it to work driving a load instead of building up and creating a NLO laser effect. I believe that the energies, as soon as they are translated into EM, are "caught" by the magnet and pulled into the resonant circuit, where they are measured as excess potential. I hope that this message ends up on the I-Net, as it will provide the references within conventional, accepted physics that can be studied in order to visualize the functioning of the MRA. ~ Joel

Message 10367 (01/03/95 14:42)
From: Joel McClain
To: Norman Wootan
Subject: MRA Tech Notes

Hi Norm ~ I wound (looser than normal) another MRA using #22 stranded wire, the wire with the purple insulation. It also has a step-down ratio, but with more turns that the first MRA. It is only 1.13 X unity at max power, but detunes to 12.75 X unity under a motor load. This is much better than either of the ones sent to Walter or to Tom. This MRA will push the input voltage up to over 1.5VAC over no-load, while still powering the motor, which means that it has more excess potential than either of the others, and this shows up in the 2900 ohms of effective impedance at the max gain setting.

Also, since some piezos work well and others don't, I'm trying to locate the variable which determines this. In measuring the capacitance of the good piezo in the current MRA, it shows definite variance in capacitance when you reverse the leads from the meter. It measures 5nf in one direction, and 3nf when the meter leads are reversed. Comparing this with other piezos in the "reject" pile, most have lower capacitance and little if any difference when the leads are reversed. I think that this is related to the poling of the piezos... possibly it is lost on some in the process of soldering them. ~ Joel

Message 10371 (01/03/95 17:11)
From : Norman Wootan
To: Bill Beaty
Subject: MRA

Bill: When you get the MRA I sent to you, check the windings for solid wire. If I wound yours with solid wire just strip it off and rewind with fine stranded 22 Ga. with the same # of turns or you could experiment. ~ Norm

Message 10378 (01/04/95 00:38)
From: Bill Beaty
To: All
Subject: MRA Blunder???

I just noticed a big Oooops! in the MRA files. The Fluke 87 True RMS meter specs in the Fluke catalog are listed as 20KHz max. I don't know if this means the tolerance is only good to that point, or whether that is the half-power point. I don't have the complete spec. This implies that the meter is not good to 200KHz as was said earlier, and its possible that all the readings taken with it are wrong. What say you? Have you tried crude calibrations of this meter versus a scope, when both read the output of a good oscillator that's fairly constant with frequency? Could you do a cross-check to find out where the meter readings get REALLY bad?

Message 10384 (01/04/95 07:41)
From: Norman Wootan

To: Gerald O'Docharty
Subject: My MRA

Gerald ~ Well, "Trace Mountain" is going to get a care package, for we can't have Tesla experimenting with inferior parts. Ha! Ha! Just kidding, will send you the "real" thing to experiment with. We have been using filters on the DC bridge, mine is bigger than Joel's cap for I have been useing 16000 UF @ 60V while Joel is using something smaller. The only problem with a big cap is you have to be a little more patient with changing values and adjustments for it takes a little time for the cap to bleed of or build up with variations in the output but it is "pure" DC. All the measurements are cross checked by scope and the DC out from a filtered bridge is flat line DC. You are correct with the piezo freqs for most of these circuits settle out with a piezo freq around 34600 range which is a fifth (1/5) of the ferro-magnetic-resonant freq that we derived. I wish someone else would do some testing in this area to verify our findings. When you get your "TET" finished you can do the same test we did and see where and how this was done. So far everything goes back to this fundamental freq which I am still convinced that Tesla knew full well when he built his Colorado Springs coil. Sounds reasonable to me that he would use a freq very close to the natural earth ferro magnetic resonant freq to form a beat difference of the 7.83 (that's close enough) which is the Schuman cavity resonant freq. Back then he had it close to 8 Hz and since it has been narrowed down even better. This would have been an "elegant" approach to form an 8 Hz standing wave between his big coil, the earth and the surrounding air. I would like to get the "Corum's" feed back or comments on this idea. Thanks for the interest in the MRA, good to hear from the "attic workshop". Your friend ~ Norm

Message 10385 (01/04/95 08:01)
From: Norman Wootan
To: Bill Beaty
Subject: MRA

Bill ~ We are checking the numbers from the meters with scope back-up so we feel comfortable so far with the measurements. Joel's total resistive equivalence to the circuit places everything back on "OHMS LAW" for cross checking and verification. What can you do with an animal that is so non-linear that everything is inverted or does just the opposite that you would normally expect from a circuit. Well, the proof is in the hands of Walter Rosenthal and Tom Bearden at this time and soon will be on Hal Puthoff's work bench so what else can we do other than what is already reported. Your question as to telling all, that has been the policy all along for Joel and I agree that it is dumb to go "Public Domain" then hold back critical data that would impair duplication efforts of others. Please share "all" tech notes and comments with everyone for even the smallest clue could turn on the "light" in someone else mind and assist to overall project. Heck, we admit we don't have all the answers, that is the reason for making this a joint project with all interested in a new form of energy. ~ Norm

Message 10387 (01/04/95 11:28)
From: Joel McClain
To: Gerald O'Docharty
Subject: ALSO TO BILL BEATY...

Hi Gerald ~ Yup, we've been using ordinary electrolytic filter caps on the output of the bridge, same as with any other power supply. We can do this because 34KHz is still well within the alpha cutoff freq of diodes and audio transistors. Good that Norm is sending you a kit, because if your magnet is not ringing audibly, you aren't going to get the effect of virtual rotation of the domains, and will have an ordinary series resonant circuit. From what we've seen, you have to have the magnet resonant range in the first octave of a three octave series. The magnet's range is about 8-9KHz, so one octave up is 16-18KHz and the next octave is 32-36KHz, with the piezo right in the middle of its range at about 34KHz +/- a few hundred hertz.

In answer to Bill's question, I rechecked the "Owner's Manual" for the Fluke #87, and it definitely says 200KHz... in fact, while you are measuring voltage with it, you can press the "HZ" button and get an instantaneous reading of freq and if you press it again get a reading of the duty cycle. It's a great piece of gear. Also, since Norm and I have both blown up test equipment with the MRA, it's a lot less to risk for routine measurements.

If you caught that last message for Bob Paddock, you have a better idea of the reason for measuring primary current with a resistive equivalent circuit. There is a scalar to EM conversion going on which manifests itself as circulating current... Bearden calls it a "ping pong" effect, as the "inner channel" increase is bounced back by the resonant circuit, causing yet another increase, and so on. The components themselves and the amount of load determine amount of this current. However, adding a series dropping resistor effectively alters the circuit by closing the channel, which is why primary current from the signal source increases, a direct violation of Ohm's Law (increasing resistance should decrease current) and the result is an ordinary series resonant circuit.

I'm going to try to get some of the info from Tom Bearden into a file because he can describe the effects with far more scientific authenticity than I have the knowledge or experience to do. ~ Joel

Message 10392 (01/04/95 17:31)
From : Joel McClain
To: Bill Beaty
Subject: The Fluke ain't a fluke...

Taken from the Fluke #87 Owner's Manual: Introduction, Page 1: "The Fluke 87 True RMS Multimeter is a handheld, 4000 count instrument that is designed for use in the field, laboratory, and at home. The meter combines the precision of a digital meter with the speed and versatility of a high resolution analog display. Frequencies between 0.5 Hz and 200 kHz can be measured with up to 0.01 Hz resolution. How to Use the Meter, Page 12: "In the frequency counter mode, the Hz annunciator is displayed. The frequency function autoranges over five ranges: 199.99 Hz, 1999.9 Hz, 19.999 kHz, 199.99 kHz, and greater than 200kHz."

Hope this clears up the question of freq accuracy... I also ran the Simpson #710 freq counter along with the Fluke #87 and they track well together, and the voltages have been 'scoped for amplitude also.

With the types of equipment that you would find in most good electronic shops, we believe that the data that we have released (which is everything we know, as fast as we know it) is accurate and valid. We are typically measuring voltages at freq's that are in the bottom one fifth of the meter's freq range. ~ Joel

Message 10406 (01/04/95 19:17)
From: Joel McClain
To: Norman Wootan
Subject: I SEE THE LIGHT!

Hi Norm ~ To test Bearden's NLO theory, i.e., P-channel quantum potentials forming at light wavelengths, I loosely wrapped a strip of aluminum foil around the windings of the MRA. This will have little or no effect on a conventional transformer, except to shield it from ambient noise as in TV UHF circuits. However, the MRA output dropped from 16.25VDC at .14A to 10.0VDC at .14A... my goodness. ~ Joel

Message 10417 (01/05/95 01:14)
From: Bill Beaty
To: Joel McClain
Subject: (R) The Fluke ain't a fluke...

Whew, sigh of relief. I don't have the specs, but it sounds like your meter is good for voltage up to 20KHz, then is not accurate at higher frequencies to the full number of meter digits. So, accuracy depends on how fast the meter response tails off above 20KHz. And the Fluke literature DOES say 200KHz for the frequency counter, but 20KHz for the Vrms part. I hate to be finding fault with your measurements, but I'm really just trying to get more confidence in what you are seeing (until I get a chance to try it myself.). It still probably would be a good idea to measure voltage of a good source with both the scope and the meter, and find where the meter starts to fail. For example, when does its reading dip 5% below that of a 50MHz scope? At 21KHz? Probably not. At100 KHz? Could well be.

Message 10428 01/05/95 13:21)
From: Joel McClain
To: Jerry Decker (Sysop)
Subject: Howdy

Hi Jerry ~ I've been getting messages from you...but not returning any as of yet because I've been in constant "test mode" with the MRA. I'm sure that you have some concerns along with a very full agenda, so I'll not ask any favors at this point. We've really only just begun with the MRA.

I see now that it is possible to add additional quantum coupled stages. Because the coupled potentials are instantaneous in the self-targeting mode, they can be effectively added in 3-space to realize EM power outside the P-channel. What is different in this "mode" is that voltages in parallel will "add", and voltages in series will stay the same, albeit at excess potential.

With one output on the MRA, we are limited to one set of complete Whittaker biwave harmonic pairs. Each load will have slightly different characteristics...and will "attract" other biwave pairs in the MRA, as long as the loads are within the aggregate resonance.

I believe that this is similar to the concept used by Moray, with charge coupled stages, or for that matter, with Keely in his use of sequentially applied vibrations. Each turn of wire around a Tesla coil, or each crossover of a caduceus coil is the same in effect.

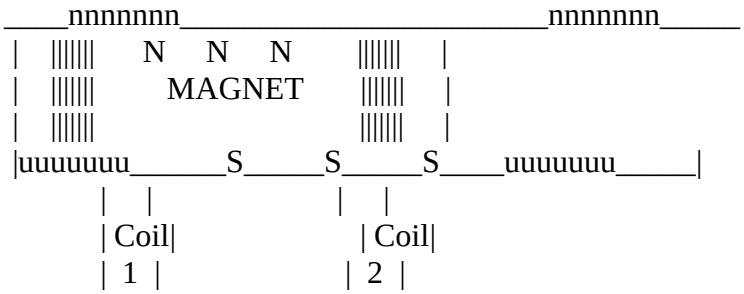
The materials in the MRA are all optically active, which engages them in the P-channel via the CTP process. If light is reflected away from the MRA, or if it is optically shielded, it loses all effect. For the record, however, we have seen most, if not, all of the "anomalous" criteria associated with unity + devices. The piezo will lose weight. Clocks and watches run slow. Some wires in the series path stay cool. And, of course, there's the matter of excess potential above no-load.

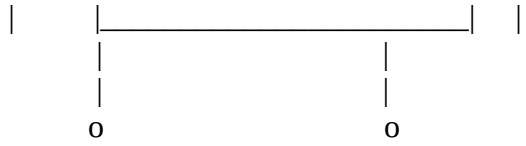
And still, we've only begun. The design is three weeks old. I've refused to download the I-Net data, because I feel very strongly about keeping focused, and don't need to hear all of CEM "rules" repeated, as if I had never heard them before, nor the condescension of fools in their glory. Let them enjoy their moment, as Faust did his. ~ Joel

Message 10436 (01/06/95 02:16)
From: John Peters
To: Joel McClain
Subject: (R) MRA as a "solar" device

Joel; your message (10188) made me think of what is in WBSMEMO.ASC. I have been intrigued by this file, and where it speaks of extracting power from the Earth's magnetic field sounds like how you explained the MRA. The actual quote is "The design has now been completed for a unit which should be self-sustaining and in addition provide a small surplus of power. Such a unit, in addition to functioning as a 'pilot power plant' should permit the study of the various reaction forces which are expected to develop." Do you think that Smith's device is along the same lines as the MRA?

Message 10437 (01/06/95 06:50)
From: Bob Paddock
To: Bill Beaty
Subject: (R) MRA/Sweet coil





You just redrew Coler's "Magnetstromapparat"! Very nice art by the way...

Message 10447 (01/06/95 09:15)
From: Joel McClain
To: All
Subject: MRA Tech Note

Last night Norm was over and we added another output to the MRA, so that it was driving lights (incandescent and fluorescent) in addition to the usual motor load. This required retuning the MRA for maximum power to match the new load requirement. We were "overdriving" the output of the MRA below unity to "max out" the power to the load.

After the lights were removed so that only the motor was on the output, the MRA was retuned for the motor, but the resonant frequency had changed. Prior to adding the lights, the resonant frequency was 34.28 kHz. After removing the lights, it was 33.43 kHz. Although this is only a difference of 850 Hz, it is interesting as it indicated that the MRA is alterable. This might be useful in some applications.

The MRA still detunes for max gain as before, and still provides surplus potential (1.5VAC above noload) when detuned, but this is the first indication that it can also be REtuned to a new resonant center frequency. Apparently, the magnetic core is more "permeable" than we had thought.

Message 10450 (01/06/95 10:39)
From: Joel McClain
To: John Peters
Subject: mmmmm....could be!

Went back and read the WBSMEMO.ASC file again... memory ain't what it used to be, and never was. I hadn't thought of the MRA within the context of that file, but you are right on the mark with your comparison. The biggest hurdle to understanding the MRA is in seeing it as a new device via existing technology. It is a different technology, actually a very, very old technology using new components. However, because the technology isn't in the "books" yet, it is viewed (at best) as a "new" technology.

The existing "rules" don't apply...but the old, really old rules do. For example, when Heaviside bastardized Maxwell's Theories (you will NOT find the Heaviside interpretation in ANY of Maxwell's published works), Heaviside stripped out all of the references to the ether, which he said was "mystical and should be murdered from the theory", and so he murdered the ether...except that it just wouldn't die!

Maxwell opened the door to P-channel quantum potentials, and Heaviside slammed it shut. Heaviside wanted to provide simple "laws" so that the electricians of that day could vector power and measure current in workable systems. Heaviside never went to college, did not know calculus, and was lost in the true implications of Maxwell's theory. It's time we moved up to the reality of ALL of Maxwell's theory, not just the kindergarten version.

Anyway, I got side tracked...back to your question. Without having seen the WBS device, it's hard to say for sure, but the effects seem similar. The INTENT of the MRA was to design a device compatible with naturally occurring energies, specifically ferro-resonance as it applies to earth's electromagnetic fields. However, in DOING this, especially with optically sensitive materials, we enabled the MRA to re-open Maxwell's door. What we caused was a link to form which translated etheric energy into ordinary EM in a closed loop resonant circuit. This link is referred to as the "P-channel", because it manifests as excess potential.

This effect has been experienced in semiconductor circuits for many years, and is normally destructive to the devices, so resistive and filtering components are added to effectively "close" the channel. This isn't necessarily bad, because until circuits can be designed to USE the excess potentials, we don't want them going into resonance and burning out. As seen by the Neiper/Seike Ring (the schematic that is on KeelyNet is wrong, btw), you also experience gravitic effects when you allow tetrahedral lattices to self-resonate.

Considering that the MRA at resonance is virtually stopping the spin of particles (like a strobe synchronized to a timing mark), it is very likely that a more efficient MRA could cancel the quadrupole effect of gravity. There are other ways of doing this, such as the Biefield-Brown method of high potential or the Searl method of folding energy onto itself in resonant plasma layers, and possibly the technology of anti-g (for a practical space ship) would utilize some or all of the above. However, we'll never get "there" from "here" by using the Heaviside "laws".

Conventional science has a "circle the wagons" mentality to this new (old) technology, and insists on trying to hammer the wheel back into a square, on the assumption that it will "work" better because roads are flat. So we clunk along and congratulate ourselves on our "vast" achievements. OK, I'll get back down off the soap box...

We'll drag them by the ear if necessary, kicking and screaming all the way, and force them to re-open Maxwell's door. ~ Joel

Message 10454 (01/06/95 16:38)
From: Joel McClain
To: All
Subject: Test Report

To: Hal Puthoff ~ Hi Hal, Yes, you are correct about the motor current. We checked it with an analog meter early on in the tests, and it indicated 140 ma. This was then used as a constant. However, I just rechecked it with the Fluke 87 inline to the motor, and the true DC current varies from 120 ma at max power to 116 ma at max gain.

As for the output switching, we are trying to determine the actual primary circuit current of the MRA. Once we have tuned the MRA, we remove it from the output of the signal source, and connect the signal source to the decade box. Once we measure the amount of resistance required to attain the same drop in amplifier output voltage as the MRA was causing, we then can divide resistance into voltage to determine the current draw of the MRA. We've tried other methods, such as low values of resistance in the primary of the MRA, and the results defy ohm's law. Adding resistance actually increases primary current...which should also increase secondary output, but in fact, causes it to decrease. As you will see, the current in series with a resistor in the primary circuit is higher than the current with just a meter in series with the primary, which makes no sense in terms of classical EM theory. We believe that the resistor is closing the "P-channel", which removes the source of excess potential. Even the slight resistance of the meter, or of a current probe which contains a coil, will have the same effect in varying degrees. So, we use the decade box as an equivalent load, instead.

Also, Norm and I put a very heavy combination of output loads on the MRA last night to see how much power we could extract from it, regardless of gain. This experiment lasted for about an hour. After we were finished, we found that the center resonant frequency of the MRA had changed from 34.28 to 33.48 with just the motor on the output. Apparently, the magnetic core is more "permeable" than we had thought. So, here are the new measurements, factoring in the measured motor current and the "new" center resonant frequency:

MRA #3 Test Data
Test Date January 6, 1995

Maximum Power Mode:
Resonant frequency = 33.48 kHz
Input signal with noload (MRA not connected) = 26.97 VAC
MRA output load = Pittman DC motor, 19.1 VDC @ 120 ma.
Input signal with MRA connected and powering motor = 25.39 VAC
Input signal amplitude reduction as per above = 1.58 VAC
Measured equivalent resistance to achieve 1.58 VAC drop = 200 ohms
RMS input power @ 200 ohms = 2.28 W
MRA output = 18.35 VDC X 120 ma = 2.20 W

Maximum Gain Mode:
Resonant frequency = 33.34 kHz
Input signal with noload (MRA not connected) = 27.13 VAC
MRA output load = same Pittman motor @116 ma
Input signal with MRA connected and powering motor = 26.88 VAC
Input signal amplitude reduction as per above = 0.25 VAC
Measured equivalent resistance to achieve 0.25 VAC drop = 1600 ohms
RMS input power @ 1600 ohms = 319 mw
MRA output = 15.5 VDC X 116 ma = 1.80 W

Notes: This data uses inline current measurements for DC output at both the maximum power and maximum gain settings of the MRA.

The center resonant frequency has changed from the previously measured data of January 3, 1995, and was still continuing to change (upward) even as these measurements were being taken. It may eventually rise to the original measured frequency of 34.28 kHz.

The maximum gain measurement of primary current using a decade box was taken in a linear area of potential which would show a voltage drop with the MRA in the circuit. Further decreasing frequency will cause the voltage from the signal source to increase above the no-load voltage, in which case it is not known how to measure input power to the MRA.

Message 10477 (01/07/95 10:04)
From : Joel McClain
To: Norman Wootan
Subject: Seeing is Believing ~ Incandescent lamp test

There is a very easy method for "seeing" the power gain of the MRA, and it does not require power amplifiers, only a sine wave generator. You need two of the tiny "grain of wheat" lamps...if you don't have them on hand, I will send you some. Put one lamp is series with the input to the MRA primary, and put the other lamp in series with the MRA secondary to the bridge rectifier. If you are not using an amplifier, put a 50-100 ohm resistive load on the output of the bridge rectifier. If you are using an amplifier, use more resistance to avoid burning out the lamps.

Using only a signal generator for the MRA input, tune the MRA to peak resonance. The lamp in the primary circuit will not illuminate, but the lamp in the secondary circuit will begin to glow. The glow is bright enough to photograph for your records of this test.

If you are using an amplifier, do not put the lamps in the circuit until you have detuned the MRA for max gain. Then put them in, and you will see that the secondary lamp is much brighter than the primary lamp. You can continue to detune until the primary lamp is "out" (at which point the input voltage from the amp is above no-load) but the secondary lamp is still glowing.

I suggest that light sensitive devices could be used with the lamps to measure gains in terms the output of these devices. However, I still have no idea of how to measure gain once the primary lamp is "out" and the secondary lamp is still lit. ~ Joel

Message 10492 (01/08/95 11:05)
From: Norman Wootan
To: Bill Beaty
Subject: MRA Parts

Bill: I sent a package of MRA info to Don Smith down in Houston for he has a similar circuit to the MRA except that it uses a Tesla coil running at high voltages to interact with the earth's weak ferro-magnetic field to produce over-unity operation. A lot of people have practically given up on Don's device for he has not powered a practical load to date that we know of but his theory is sound as far as I can determine. An incorporation of what we have learned about ferro-magnetic resonance frequencies and his Tesla coil driven circuit could provide another effective method of

ZPE tapping. Don has done some research on the piezo material and pinned down three current manufacturers of these transducers. The first is ADDCHEM a spin off from the PENWALT family. Then there is SOLVA and KERRA. He also went to the specialty wire manufacturers and asked about making a piezo type conductor that could be incorporated directly into our circuits. The wire manufacturers were amused to say the least for their comments were "we have been working all these years to make a wire that produced
no noise and you come along and ask for a degenerate conductor that will make maximum noise". They are interested in the concept though and will get back to us with the data needed. I would not be too quick to judge the MRA as a non-reproducable device for between Joel and I we have built 8 of the units and have been able to achieve the over-unity ratios that we are comfortable with. The biggest problem that I see is that no one wants to take the time to do the necessary reading of the messages, tech reports and go out and find the materials. We clearly stated that we do not have all the answers and have not nailed down exactly what will or will not work as to magnet type or shape. The piezo is a big variable for we have a stack of culls which just will not work. We expect that they have lost the poling that was done at time of manufacturer. I know that there is someone out there on the Internet who has experience in this area. Dan Davidson told me that to the best of his knowledge the poling is done at the "curie point" of the piezo material with a capacitive discharge used to establish the required "polarity of charge". If anyone out there has knowledge in this area please give us some input so we can revive some of these "dead" piezo's. I'm sure others will encounter this problem so we need more knowledge about the piezo element. Since the "Jury" is still out as far as testing is concerned we have to wait but in the meantime Joel and I are still building more working devices… ~ Norm

Message 10508 (01/09/95 08:12)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ Alnico "8" 20.84 Excess @ 36100 P: 48.60 L P: 27.76 NL … Seems that the harder the magnet material the closer we get to the natural resonance of the transducer. The MRA cannot tell the difference between materials. Sorry, "Mother Nature" made all magnetic flux the same "hyperspatial" frequency therefore the boy scout cannot tell the scout master that the reason he got lost was because his compass was not tuned to the right frequency. The MRA is capable of extracting or pair coupling in the "P" channel no matter what the source of magnetic flux be it the earth's natural flux or some "exotic" mix of elements we call super magnets. Don Smith is going to love this for it vindicates his valiant efforts which appeared to be dashed on the rocks of failure. "RESEARCH" is the key. ~ Norm

Message 10515 (01/09/95 11:45)
From: Glenda Stocks
To: All
Subject: Re: Upload of TMIDEVIC.ZIP

Stewart Harris created a device about 19 years ago, which he believes raised a mass via magnetic power (this is as I understand it). Stewart understand how to make his device based on a dream that he had, and so, he is also interested in discovering exactly how this information came to

him. Nevertheless, he has the experts confounded as to why/how his device does what it does. This file TMIDEVIC.ZIP contains a series of message threads about his device and a video he has that demonstrates it. I will be happy to convey to Stewart any comments or remarks. ~ Glenda

Message 10543 (01/10/95 12:08)
From: Joel McClain
To: All
Subject: MRA lamp Z test

This report is here is because of the problems with measuring the primary current of this beast. The MRA adds voltage to the circuit, which is nice, but it creates ALL KINDS of current measurement problems.

So, I have appended the "grain of wheat" lamp test to give real numbers instead of just seeing the difference in light. I put one
of the lamps directly on the signal generator output, and measured its impedance at the frequency of the MRA under test. Why? Well, because the lamp can thus be put into the primary, and when you measure the voltage drop across it, you can divide that by the impedance and KNOW the actual primary current... no need to worry about the excess voltage, because if any of it "adds" across the lamp, primary current will appear HIGHER, which would reduce the gain of the MRA, and help to disprove it as an overunity device. I'll take that chance, as long as I know the exact impedance of the lamp. Also, where there is a difference in measured versus calculated output current, I've taken the lower number, also to be ultra-conservative. So, here goes:

The "lamp test" of the MRA has been further used for the purpose of standard "ohm's law" tests and measurements. The "bottom line" figures are 470.0 mw input to the primary of the MRA and 751.0 mw output from the secondary. This is a gain of 1.6 times unity at the low power end of the resonant range. The measurements and calculations are given below:

AC signal in = 28.94 VAC under load of the MRA
AC signal in = 28.54 VAC without the MRA connected
AC excess potential provided by the MRA = 0.40 VAC
AC signal at secondary = 8.64 VAC
Measured secondary current = 123 ma
Voltage drop across lamp = 2.92 VAC
Calculated current = 2.92 VAC \ 20.77 ohms = 140 ma with an error margin of 17 ma from measured current
Secondary power = 8.64 VAC times 123 ma times .707 = 751 mw

Bulb impedance = 20.77 ohms at the freq input to the MRA
AC voltage drop across bulb in series with primary = 0.470 VAC
Primary current = 0.470 VAC \ 20.77 ohms = .0226 Amperes
Primary power = .0226 Amperes times 28.94 VAC times .707 = 462 mw
Lamp power = .0226 Amperes times 0.470 VAC times 0.707 = 7.5 mw

To cross check these numbers, the total primary impedance was calculated, and the impedance of the lamp was subtracted from it. If accurate, the difference in power should equal the power which is added to the primary when the lamp is not connected:

Primary impedance = 28.94 VAC divided by .0226 Amperes = 1280.53 ohms
Subtracting lamp impedance of 20.77 ohms = 1259.76 ohms
Primary power with lamp = 462 mw
Primary power without lamp = 28.94 VAC divided by 1259.76 ohms = .02297 Amperes times 28.94 VAC = 665 times .707 = 470 mw
Calculated power of lamp = 7.5 mw and under cross check it is equal to 470 mw minus 462 mw = 8 mw, with an error margin of 0.5 mw

Because:
A. The lamp impedance was measured out of circuit at the frequency used in the circuit
B. The same lamp impedance is used for both primary and secondary current measurements
C. Primary power tracks on cross check.
Therefore,
D. Primary power = 470 mw

I THINK that nails it...at least as far as can be measured with a low power lamp, and assuming that the MRA should eat any differences in measurement versus calculations which would reduce its gain. All of the measurements are in series for current, as per ohm's law, and all other calculations are ohm's "to the letter". As usual, my coffee got cold, so I'll stop here. Thank you for your continued indulgence. ~ Joel

Message 10548 (01/10/95 14:53)
From: Joel McClain
To: All
Subject: Lamp Z test followup

Just an addendum to the lamp impedance test report. Found that the circuit would not stay at unity + indefinitely at that very low level of input. After about an hour, the voltage drop across the lamp in the primary went up to over a volt, and that knocked the MRA down below unity. I think that the low level of input wasn't enough to sustain the harmonics that had built up as the MRA was warming up. ~ Joel

Message 10551 (01/10/95 17:31)
From: Bob Paddock
To: Norman Wootan
Subject: (R) MRA (Power Test)

Re: A vacuum tube is the only animal that could survive the punishment in a high voltage circuit like this. Bob Paddock's indestructible transistors won't cut it in this harsh environment.
Thoughts and ideas: I've come across a couple of more transistors for crummy environments. Motorola's TMOS Smartdiscret Products. For example 400V/10A IGBT, MGBP20N40CL/MGB20N40CL, "designed primarily as ignition coil drivers to withstand high

current in a pulsed mode with out latching." Or more interestingly the 60V/1A MLP1N06CL "device that has integrated on-chip current limit capability, drain-to-source voltage clamping and gate voltage protection." Also National Semiconductor "Overture" [TM] Audio Power Amplifier Series with SPiKe [TM] Protection.

"The performance of the 876/LM3886/LM3875/LM3876, utilizing its Self Peak Instantaneous Temperature ('Ke) (SPiKe[TM]) Protection Circuitry, puts it in a class above discrete and hybrid amplifiers by providing an inherently, dynamically protected Salve Operation Area (SOA). SpiKe Protection means that these parts are completely safeguarded at the output against over voltage, under voltage, overloads, including shorts to the supplies, thermal runaway, and instantaneous temperature peaks."

Specs are 25W to 150W (Depending on part number) of continuous average power to 8 ohm load with 0.06% (THD+N) from 20 Hz-20KHz.

Message 10553 (01/10/95 17:35)
From: Bob Paddock
To: Joel McClain
Subject: (R) MRA Tech Notes

I think that this is related to the poling of the piezos... possibly it is lost on some in the process of soldering them. I talked with some one who was familiar with Ultrasonic Welding. They said that the piezos where typical compressed with a rubber compression setup, and contact was made with brass springs. Would this work better/worse than soldering? Yet another point to experiment with...

Message 10569 (01/11/95 07:35)
From: Norman Wootan
To: Bob Paddock
Subject: MRA

Bob ~ Thanks a million for the package and the schematics. I'm very interested in the "high performance" transistors so I really appreciate your search efforts. The magnets are bonded together so don't try to separate them for they break very easily. As to the transducers Joel and I have not figured out the .07 figure. In the batch I bought they were sorted out and grouped under that number, i.e., all the .07's were together then there would be a group of .09's etc. Some sort of matching they did at manufacturing. I guess they were installed in the welders in matched sets so as to have the highest performance. The brass strip method of providing electrical contact works for I have several mounted this way in between two pressure plates so I can torque them down to about 100 # pressure which Dan Davidson recommended I try. The other train of thought is to make the contacts in a way as to allow the piezo to freely resonate in free air with minimum contact at any point. Soldering directly to the silver surface is detrimental to the piezo as evidenced by our stack of "dead transducers". They are in effect almost a pure capacitive device and will give off a very loud "squeal" when they go "sour" and quit working. I know that someone who works with these devices will eventually "jump in" and educate us about these animals. The sooner the better. These "OEM" items are always like that for they are

manufactured for use in a specific piece of equipment with precise specs. We come along and try to adapt this device to one of our experiments out of convenience sine we picked them up surplus. This is OK for experimentation and all out there should realize the facts behind what I said. When questions arise as to data on the transducers I would say that we really don't know what we are dealing with but they work. When we get further along and get some "optimum" numbers we may be able to go to the original "OEM" source and have some super piezo's designed that will target the performance curves that we develop through trial and error. It would be nice if there was a computer program that could analyze the MRA parameters and design the optimum piezo characteristics we need. Right now all we can say is that in a circuit that does everything "contrary" to accepted electronic and physics theory we can't get a handle on exact and optimum design characteristics. It will eventually take a team of specialized engineers to figure out how to take this MRA idea and make it do useful work. All we have done is open the "door" to the fact that tapping the Zero Point is real and can be demonstrated. Where and how this is developed remains to be seen. Once the fundamental theory is proven then very large sums of capital will be thrown into research and all this will become reality. All we could do was give the info to the world and let smarter folks run with it to it's useful application in solving our energy problems. What more can I say. Thanks again Bob and good luck with your MRA. ~ Norm

Message 10590 (01/12/95 09:20)
From: Bill Beaty
To: Norman Wootan
Subject: (R) MRA Parts

I got your package Monday, and have spent a few hours messing with it. THANKS! Excellent packaging job, nothing damaged at all. It seems that my signal generator can't put out a high enough voltage to get the effect to kick in. Next I'm going to get a friend's Carver amp. My Wavetek at work puts out 20 Vpp, but it gets pulled down to 8Vpp at resonance, and the energy throughput is totally conventional: exactly 100% at resonance, and falling fast at other frequencies. The magnet does NOT make any noise, and all the signals in the circuit are pure sine waves, without any other frequencies.

I have brochures on the way from five separate PZT manufactures, so I should get some info on "poling." Speaking of which: the piezos themselves behave very strange near resonance. All kinds of pure tones appear, and turn on and off when frequency or voltage is varied. The best freq for this seems to be a bit higher than the resonance peak. I saw signals start small and slowly grow, then vanish when the piezo is touched, only to slowly grow again. I got the "death" effect, when the piezo makes a screech and then the sounds vanish for about a half hour. Very similar to that TVQ opto-isolator device. Also similar to nonlinear optical crystals illuminated with laser light, where conventional phase conjugation creates closed reflection paths, optical resonances, self-organized hologram elements, etc. I wouldn't be surprised if the innards of the piezos were doing the acoustic version of this. I notice that when a piezo is being silent, sometimes I can get it to sound weakly by applying slight pressure to the leads. It seems that tiny bending forces have a great effect on piezo audible "subharmonic" sounds. I wonder if your piezo "culls" could be made to work by pulling or pushing just right on the lead wires. Also, the "culls" may generate a set of frequencies that just by coincidence miss the magnet resonant

frequency, so they are too far off for the piezo and magnet frequencies to grab each other and start talking. The cure for this might be to grind little flat areas on the edges to retune them.

I have a couple of ceramic slab magnets, so I built a plexi form and wound a coil around it, with the magnet suspended inside. With an extremely tiny signal applied to the coil at 11KHz the magnet rings VERY loud (and annoying!) If I touch the corners of the magnet slab, the ringing goes way down and the tuning is much broader. Instead of suspending the magnet, I found that soft foam rubber does not interfere much with the ringing of either the magnet or the piezo. This makes sense, since foam is mostly air, so the magnet thinks its hanging in air. More soon...

Message 10595 (01/12/95 10:22)
From: Norman Wootan
To: Bill Beaty
Subject: MRA Parts

Bill ~ Glad you got everthing "intact" and you are progressing with your research. If you stick strictly to the RULE9 doc. and make the magnet resonate (about 8-8.5K audible) you will find the piezo running at exactly 3 octaves up or around 34-35KHZ. Only under these conditions will you achieve the "virtual rotation" within the crystalline lattice of the magnet material. Check out the "E" message from Joel about the phone call from the engineers at Lockeed Corp that verify that the MRA does achieve over-unity for they are getting 140% and congratulate us on our output figures. They said that some German and Russian engineers have achieved similar results also. Last night I got a call from an engineer down in Clearwater FL who is getting 125% and is not even using the "cadillac" piezo's that we are using. The iron content of the ferro magnet material seems to be the key to the gains. It all goes back to what Tesla claimed when he said "A fine grade of steel will play a very important part in tapping an infinite source of energy for iron is a unique element in that it has 2 free electrons in the "M" shell of the atom that can be extracted for use only to be replenished by the ether". About the document scan, I really appreciate your efforts with this for in the near future you will see where this is going. By the way, I sent Gene Mallove a set of the messages and all the info on the Perkins Pump and my Cold Fusion test, etc. This will eventually all be tied in a nice little package for it all goes back to Joel's RULE9 document. Please send down the scan so I can see it. Maybe with the next I-net download would be fine. As to the I-net dialog, the worm seems to be turning. This "Rodney" in the Biology Group is simply going to SH-- when he reads the HUDSON file from KeelyNet. What about posting something for the Biologist to chew on and quit griping about your postings. Real soon they will wake up and realize the tie-in to their world. More later "flack taker", He! He! Thanks again. ~ Norm

Message 10630 (01/13/95 18:01)
From: Joel McClain
To: Bill Beaty
Subject: Your Message # 10589

Hi Bill ~ I almost missed the P.S. after your message # 10589. The source of the harmonics is the same as the source of the surplus potential. From Keely, we learned the importance of three

octaves in order to link up with the ether. From Bearden, we learned that the harmonics are (Whittaker) biwave pairs, and that the ether conforms to the Coulomb Transverse Potential.

So, when the requisite criteria is met, the biwave pairs vector into 3-space energy at the harmonic frequencies. That's it.

The rest of the MRA theory is resonance theory, as is the Rule of Nines, and exists to describe how to use naturally occurring lattice structures to mimic earth (and any other EM generator) in terms of the nested tetrahedral relationships.

Why three octaves? Because we exist in 3-space, and we are creating a 7-space effect, with the fourth dimension, or p-channel, acting as a conduit into (and out of) 3-space. Now, a trained observer will want to see exactly where the harmonic biwave translation occurs, and ill go nuts looking, because the wave pairs exist simultaneously with our space-time and translate instantaneously...no speed of light required.

Why nested tetrahedral relationships? Because they are the geometric relationships which embody PHI, and PHI is the pure mathematical constant to create resonance... musical, or any other type. That is why you see the excess potential at the load and source simultaneously, and it is load dependent to the extent that the load affects harmonic interaction of the magnetic core. That is why you have to lower gain of the MRA to close the p-channel by removing the excess potential first.

You can't see the translation, only you can only see the effect. I look forward VERY MUCH to your tests and comments. ~ Joel

Message 10634 (01/14/95 08:25)
From: Norman Wootan
To: Joel McClain
Subject: MRA

Joel ~ New winding set up: BaFe magnet, AWM style 1860 1/4" ribbon braided tinned conductor for secondary, AWG 20 Ga. stranded primary yielded, 49.20V @ 28.55V sig for 20.65 excess potential @ 36.18KHZ. We will find that correct wire type and turns ratio yet. I'm using 100 T on P and 100 T on Sec. I have several more combo's yet to try so will keep you posted. ~ Norm

Message 10640 (01/14/95 10:49)
From: Joel McClain
To: Bill Beaty
Subject: PHI and the MRA

Hi Bill ~ The last message wasn't as clear as I would have liked with regard to PHI. I once worked out the harmonic and octave relationships as PHI (and PI, since PI = PHI squared, times 6/5... thus PHI squared = PI...also, 1 + 1/PHI = PHI, which is also known as the Fibonacci Series).

The file PHI&RES.ASC has some of this information, and because the "notes" harmonize perfectly and the octaves double exactly, this conforms to "standard" musical scales as are used today. Using the Fibonacci series as a starting place for note frequencies is not an arbitrary decision.

Today, we see PHI as a methematical constant, ie, 1.618, for use in plane geometry. To the ancient Egyptians, it was math but had a much deeper implication… it was the symbol of rebirth throughout eternity just as the Fibonacci series "perfects" at higher number intervals. Also, because the use of PHI in art is very "harmonious" to view, PHI coordinates (nested tets) were used by Michelangelo in the dome of the Sistine Chapel, as well as by Veronese, Raphael, da Vinci, and was even used by the architect Le Corbusier in the design of the United Nations building.

In retrospect, I think that this must be a perfect validation of the resonance based chart of the elements as created by Walter Russell, although he certainly doesn't need any validation from me. The fact is, music is math and geometry, and geometry is the yardstick for three dimensional existence. It's all one nested relationship, and the singular constant is PHI. If you want to create resonance and balanced harmonics in octave groups, you must use PHI. Because we tend to separate "music" from "science", we don't HEAR nature, and we trust our intellect to create unnatural yardsticks. Fact is, when computers were invented, and IBM needed programmers, they hired musicians to train for the positions.

In an electronic circuit, semiconductors are made of silicon or germanium, both of which are tet lattice structures, and both of which will occasionally break into free oscillation, rich in PHI based harmonics... that is how the Nieper ring works, because once the material has three octaves of resonance, the particle spin is virtually stopped... like a timing mark under a strobe...and the effect of gravity is suspended.

Three octaves are necessary in 3-space because the each of the octaves "fills" one dimension. The octaves interact with each other to make harmonics at 90 degrees of phase separation, effectively "filling" a 3-space object. This is mass aggregate resonance, and it allows you to couple biwave vectorless energy into a circuit. It also allows you to overcome temporal effects as well as gravitic effects. That is why I said that when you nest two tets, you have the keys to everything.

The MRA uses materials which are cube latticed, and a cube IS a nested tet sitting on its "flat side". So, when you trap the harmonics on one side of a phase reversed series resonant circuit, you develop a potential which is higher than the no-load voltage of the device which is supplying the circuit. That's half of ZPE. The other half is having ferrite in the resonating core to provide electrons to match with the excess potential to create power to a load. And that's the MRA.

Part of the resentment to this information is simply due to the fact that all of this was known to and possibly discovered by very ancient peoples...and we are lagging behind them today in our comprehension of science as nature, by the division of music and science, etc. Well, all I really wanted to do was to provide correlations to help tie in the octave relationships with the lattice geometry, and I hope that this information helps. You can see how well it is received by most

people, but you can also measure the excess potential on your own MRA so you'll have to decide for yourself.

Message 10666 (01/15/95 13:21)
From: Bob Paddock
To: Norman Wootan
Subject: (R) MRA (Power Test)

Re: A vacuum tube is the only animal that could survive the punishment in a high voltage circuit like this. Bob Paddock's indestructible transistors won't cut it in this harsh environment. Here's a new one just out form Hitachi: "Robust 50W power MOSFETs help reudce EMI For safe electronic power switching for lamps, solenoids, electric heaters and motors in automobiles and industrial control systems, the HAF2001 power transistor is fully tolerant of short circuits and practically indestructible. Under conditions where traditional power transistor would fail and perhaps cause fires, it can turn off and remain off until reset, just like a circuit breaker. The 10A silicon N-channel MOSFET also offers the tuning flexibility that is essential for reducing EMI. Tailoring device's rise time to the characteristics of a system achieves low EMI levels... HAF2001 has a 10A (ID) capability, 6V VDSS (Drain-to-Source breakdown voltage), +16V/-2.8V VGSS (Gate-to-Source breakdown voltage) ratings, 50mOhm on-resistance, and switching times (tON/tOFF) as fast as 29us/26us."

Message 10678 01/16/95 02:56)
From: John Peters
To: Joel McClain
Subject: (R) mmmmm....could be!

Joel ~ Thanks for the insightful commentary. I've asked some math professors about Quarterions and they haven't heard of them. As I am now attending college fulltime, I will poke around for some info on them. I have a couple of more things for you on the MRA: After studying the schematic for the MRA, I noticed that the Ultrasonic transducer would have a very high electrical "Q". To get maximum power out of the circuit, I think the magnet and coil combination should also have as high a "Q" as possible. Can a magnet have a "Q"?? I understand that magnets seem to produce (resonate) an output near 175 KHz. Would a stronger magnet put out a higher amplitude signal at 175 KHz? I suspect the stronger magnet (higher gauss) would have an effectively higher "Q", thus possibly getting more out of the MRA. For a given transducer, has anyone noted a leveling-off of output for increased strengths of magnets

Message 10680 (01/16/95 06:28)
From: Norman Wootan
To: John Peters
Subject: MRA

John ~ Since I have been doing the testing of different winding combo's and magnet material while Joel is doing the performance testing I may be able to answer your questions as to a more powerful magnet material giving a better performance. That ain't the way it works as far as we have been able to determine. We are dealing with a phenomenon here that is hard to grasp in that

we are generating in the primary of the MRA circuit what we term as excess potential. This means that the voltage across the primary input to the MRA as coming from the signal source is driven up as much as 1.9 X. Example: I have a MRA running as we speak that has a signal source from the amp of 20.95 VAC @36KHZ no load (MRA out of the circuit). When I connect the MRA to the signal source the voltage goes up to 38.27 VAC for an excess potential of 17.32 V. While stronger magnet material such as alnico 8 and neodymium increase the excess potential seen in the circuit we have not been able to translate it into a useable output. Still some matching problems that we may be able to work out and be able to utilize these other magnet types. We believe the answer lies in the looseness of the domains in the magnet and their ability to oscillate so we get the "virtual rotation" we are looking for. I'm sure that all this will be worked out and it may be possible to use anything that has a magnetic field including the "old mother earth". The whole idea of going "public domain" was to get others to experiment with the circuit so we could sort all this out faster. If Joel and I can find this phenomenon then others should be able to help us "flesh it out" into something useful. My friend Mike down in Clearwater FL (one of Don Kelly's group) has a MRA running at unity but he has not seen the excess potential that I described therefore this is an indication that his piezo is not up to "snuff". We have found that the piezo is very sensitive in that it can lose it's poling when you solder the input leads to it. Joel and I have a stack of piezo's that just will not show the over-unity we are looking for while others work just fine. For this reason we have gone to Internet in search for someone who has extensive knowledge of piezo's and their applications. Thus far we have had no responses. Please experiment and help the cause. ~ Norm

Message 10685 (01/16/95 11:28)
From: Joel McClain
To: John Peters
Subject: (R) mmmmm....could be!

Hi John, ~ Going to college full time and still finding time to ask questions outside of your designated curriculum? I'm impressed. I'll try to make the answers worthy of the questions.

The Q of the circuit, like any series resonant circuit at resonance, is very high. The MRA output follows the contours of the Universal Resonance Chart for series resonant circuits, except for the point of intersection with input current. The current is forced low while still in the area of its linear rise according to the chart, and is at minimum at the 65% point where it should be at the "knee" of its peak rise. That is manifested as a very high circuit impedance, for as you know, a series resonant circuit is supposed to be a dead short at resonance except for copper losses. Because there is excess potential, i.e., the voltage level across the output terminals of the signal source which supplies the MRA is higher when connected to the MRA than it is with nothing connected to it, the MRA is not behaving like a dead short or even like an impedance, but more like a voltage supply...which, as you will see, is what it is.

The magnet is merely a saturable ferrite core, except that it is also a magnet in resonance, and its harmonics are being reflected, or fed back into the primary by the piezo. Here is where we have to figure this out ourselves, because there is no "prior art" that this has ever been done before. The result is the creation of a potential which is applied to the piezo in opposition to the supply potential, and which literally pushes back supply current which increases supply voltage. In the

process of doing this, this created potential is converting flux into electrons to keep this "new" current circulating in the series resonant circuit, so that the output power from the MRA is higher than the power consumed in the primary. This is non-linear operation, which will be described further into this message.

The saturation point of the magnet as a ferrite core determines the gain of the MRA. For a given load, the MRA will saturate as seen by increases in supply potential above the saturation point which result in decreases in the MRA output.

The three octave range of the MRA is related to the 175 kHz resonant frequency of magnetISM, not of magNETS. In other words, the resonant frequency of flux particles, which are universally constant regardless of the type of magnet, its size, etc., is 174.925 kHz.

Having determined that the magnets which we use will resonate most audibly at 8-9 kHz, we double that for an octave separation of 16-18 kHz, and again for 32-36 kHz, and apply approximately 34 kHz to the piezo. After the MRA "warms up" for about an hour, building up its harmonics, it rings at its 8-9 kHz magnet resonant frequency. Some experimenters keep aspirin on hand because the pure ringing sound over time will really give you a wallbanger of a headache.

Now, here's how that relates "upward" to the 175 kHz. Once again, we are in new territory here, so please feel free to disagree, offer new ideas, etc. The 34 kHz mass aggregate frequency will double if the MRA is allowed to run open, and that will double if two MRAs are tied together and allowed to run open. Each doubling = one octave, so at the third octave, the frequency is 136 kHz. When you subtract this from 175 kHz, you have 39 kHz. If you subtract 136 kHz from 170 kHz, you have 34 kHz, which is the MRA mass aggregate frequency. Either the frequency of flux is 170 kHz instead of 175 kHz, or the 5 kHz difference is due to component variations, which seems more likely.

Based upon the results which we have seen, I believe that we are using multiples of flux resonance in the MRA, in which case the earth, or more directly the sun, is providing energy which is sympathetically resonating and adding energy to the circuit. However, the weak flux potentials would not provide unity, much less several times unity. For this, we have to go back to Maxwell's Quaternions, as well as to Whittaker 1903, the Stoney/Whittaker/Ziolkowski description of the decomposition of CTP (coulomb transverse potential) into bi-directional EM wave pairs, and analyze the nonlinear operation of the MRA using known, already accepted NLO (non linear optical) functioning.

According to NLO, the piezo and primary of the MRA are connected by their CTPs, which causes slightly amplified PCR (phase conjugate replica) waves between them, which skews the energy density of the CTPs. This (most importantly) alters the ordinary isotropic distribution of potential with respect to radial direction. Each component becomes a pump for the PCR waves until the saturation point of the circuit is reached. That's standard textbook NLO, applied to define the quantum step potential increases which occur as a result of the principles of interferometry, as described by Whittaker, 1904.

The MRA applies principles which were know 90 years ago, to create effects that are defined by currently accepted NLO theory. Because these effects include over-unity, more than a few people are less than courteous in their assessment of the circuit and its inventors. However, YOUR generation can use this information to make real changes in this tired old world. Thank you for your excellent questions. Good luck with your studies!

Message 10697 (01/16/95 18:17)
From: Jerry Decker (Sysop)
To: Joel McClain
Subject: (R) mmmmm....could be!

Hi Joel ~ I am told there is a prior art MRA patent by a fellow named Richardson...I will pursue the patent number and get it and/or the actual details of the patent online... it is supposed to be almost exactly the same circuit... ~ Jerry

Message 10731 (01/18/95 09:19)
From: Joel McClain
To: Gerald O'Docharty
Subject: MRA Test

Hi Gerald ~ If you insert a resistor or other device in series with primary, it will interfere with the biwave translation which is occurring, and effectively shut down the p-channel. After you have tuned the MRA for max output, let it cook there for about an hour to build up harmonics.

Then, reduce the frequency, and as you do, you will see the input voltage to the MRA increase above the no- load voltage of the signal supply. You can "stop" anywhere in this region, and after you do, the output from the MRA as well as the input voltage will begin to step up incrementally as the harmonics once again begin to build up.

If you can measure AC current into your signal supply, you will see it decrease below the standby level. This assumes that you have an amplifier which will provide about 25 VAC to the MRA, because it sinks voltage (the piezo does) below a threshhold of about that level.

The best way to determine primary current is to detune as above but stop before your amplifier voltage goes above no-load. While you still have a voltage drop across the MRA, remove it from the circuit and replace it with a decade box, and find the resistance value which will give you the same voltage drop. This is the effective impedance of the MRA, and can be used to determine source current. Then when you compare the power as determined by IE X 0.707 with the output power, either AC or DC from a bridge, you will see your power gain. If you add a resistor to the primary, and measure current inline with it, you will find that current is greater than if you measure inline current without the resistor... which violates ohm's law... and which demonstrates the activity of the p-channel. Hope this info helps. Enjoy! ~ Joel

Message 10735 (01/18/95 09:51)
From: Norman Wootan

To: Bill Beaty
Subject: MRA

Bill ~ The dead piezo's make a very loud "screeck" sound around 2KHz when they go "sour" and will not drive the MRA circuit. I have wound some turns ratios that produced the same effect from a very good piezo though so it could be a condition of the piezo not liking the reflected excess potential being shoved back at it. Normally, when the piezo goes bad it is "clinically dead" which is the reason for needing more info on the possible "poling" loss. I can't believe that someone out on the I-Net has some valued input on this subject but has not come forward to help us out in this "vague" area. The biggest problem is that these piezo's were designed for very special applications at precise specs and it is not something you go down to "Wal-Mart" and purchase. I had a call last night from a guy who wanted to build a MRA and was fussing about a price of $100 for a new piezo of the type we are using (quote from the manufacturer) minimum purchase $200 for R&D sample. Thanks for the "scan" job, will get back to you later. ~ Norm

Message 10737 (01/18/95 11:57)
From: Joel McClain
To: Terry Bastian
Subject: Flux Frequency

Hi Terry ~The frequency of 174.925 kHz was found while testing the Nieper Ring. Because I believe that gravity is a quadrupole effect in which the spin of particles is reacting to EM fields, I felt that signal injecting the Nieper Ring would create field stability as seen in the scope display of the Ring's harmonics at the resonant frequency of flux. The center freq of the Ring is about 1.3 MHz, and is a complex waveform with a real 'soup' of harmonics.

At 174.8 kHz, the Nieper Ring waveform became synchronous. Norm tested this using a magnet/coil combination and found that it locked on at 174.925 kHz. Norm's test equipment has a higher degree of accuracy, so I believe that his measurement is closer. If you want to try this yourself, and to verify the ability of the Nieper Ring to 'lose weight', build a Nieper Ring. It's only three audio power transistors and some passives, so it's cheap and easy to put together in one afternoon.

The reason that you get 1.3 MHz from audio xistors is because they are biased on with no signal input, and they break into self resonance as a result of their tetrahedral lattice structures. The PHI of the lattices determines the center frequency and harmonic relationships. Silicon and germanium both have tet lattices.

I think that Norm's method is closer to the one used by Tesla, but I don't have the details on it. Enjoy! ~ Joel

Message 10749 (01/18/95 18:26)
From: Joel McClain
To: Gerald O'Docharty
Subject: Resistor is OK...

Hi Gerald ~ Yes, you can use just a resistor as a load...I forgot to answer that in the previous messages. Regardless of whether you measure output power as AC across a resistor, or as rectified DC across a motor, light, resistor, etc., you first need to be in the operating range of the MRA.

The first MRA that was built could provide gain with only a HP-200cd signal generator to drive it, which we have not been able to match since, except with the most recent MRA in tests with the little grain-of-wheat lamps...and that falls off after about an hour, as the harmonics die out.

As you can see from the data, it takes a couple of watts in to prime the pump (waves), after which you can back off on the frequency and achieve nonlinear gain on the output. We use a Radio Shack amp to drive the MRA...just about any good audio amp with 25 VAC output will do.

We use DC output because we believe in demonstrating the output power in useful applications, such as driving motors and lights. If you just want to measure the power I/O ratio, rectification is not necessary. Our measurements "eat" the loss caused by the rectifying and filtering, because we want to show gain in usable power, and DC is far more usable that 34 kHz. Just give a holler if we can be of any help. ~ Joel

Message 10761 (01/18/95 21:49)
From: Jerry Decker (Sysop)
To: Ed Wall
Subject: (R) Dload and MRA

Hi Ed! As to barium ferrite magnets, Radio Shack still supplies them and they can be tested with an ohmmeter... if it reads <20Mohm, it is NOT barium, if >20Mohm, it probably is... as to the Piezo's, most of us got ours from Tanners in Carrollton, a suburb of Dallas, Tanner Electronics... I don't know if they have any left but they run about $3 each... they are also sold in the back of most electronic mags... good luck... ~ Jerry

Message 10765 (01/19/95 01:57)
From: Bill Beaty
To: Norman Wootan
Subject: piezos

Norm & Joel ~ I wonder if the MRA effect requires that the piezo be imperfect, so multiple resonances can start out in the first place. If so, then it might be required that they have a dead spot from the heat and solder in order to work right. Sort of similar to the heart requiring a dead muscle area to start multiple waves of fibrillation, rather than one single strong beat. Have you seen overunity in unsoldered piezos that have terminals taped to the plating? I have a few unsoldered thin ones I'll try.

Here's a partial table of PZT materials sold by Piezo Kinetics Inc., PO Box 756, Bellefonte PA 16823 814-355-1593. Their brochure shows custom shapes, so they may not have standard stock sizes.

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Material #	Curie temp (c)	Max Field (V/mm)	K
PKI400 (Driver)	310	350	1240
PKI500 (Sensor)	350	300	1700
PKI550 (Hi-K Sensor)	200	200	3200

- More - [C]ontinue, [S]top, [N]onStop? n

PKI800 (Lo-loss Driver)	320	400	1000

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They mention that 'poling' is done above Curie temp with high voltage. This sounds suspiciously like the 'electricizing' process with electret materials (as opposed to magnetizing of magnets). If you want to experiment, you might try simply placing the piezo on a metal plate on an electric stove, and applying a couple of KV between the plate and the top terminal. If you have broken ones to sacrifice, you might try heating them up to see at what temp the plating oxidizes. If you run them with an audible signal while slowly raising the heat control, you might be able to get a reproducable heat setting for the Curie temp of your units (when the audible sound goes away) which is below the temp where the coating is damaged.

Message 10772 (01/19/95 10:01)
From: Joel McClain
To: Jerry Decker (Sysop)
Subject: Barium

Hi Jerry ~ Been doing a little studying regarding barium. It is never found in pure form due to its reactivity. It's usually processed out of barytine, and has to be stored under kerosene to keep it pure after processing. It also has a cube (body centered) lattice structure which consists of ten tetrahedrons.

The reactivity of the barium atom causes the ether in the area of the nucleus to become semiconductive, so in a poled device, like a piezo or a magnet, there is always a certain amount of potential "slippage" occurring. Barium alloys seem to be ideal for Sweet and MRA types of devices. When you combine that with titanium, which is also optically active, you can get a lot of energetic reaction.

For this reason, there is always some time distortion or p-channel activity around these piezos and magnets, if they are poled, and regardless of whether they are energized by external potentials or not. Using resonance just widens the existing channel and skews the potentials in such a way that more subharmonics can react with the ether to translate more of the biwaves, which are there anyway, into EM. A barium ferrite magnet will cause a clock or watch to run slow, not due to magnetic fields, but because the magnet is in a constant state of self oscillation with the ether...so will a barium piezo, to a lesser extent.

If you use these features to create an open system in a closed loop, you can keep the potentials moving faster than the load device can use the energy, and that is unity plus. I think maybe Sweet knew this and knew how to use it. The VTA, however, is an open system in an open loop, in that it uses the ether itself to reflect as well as to provide subharmonics, with the effect that

you can't "load it down". It just keeps bouncing back with more, because the energy is only limited to whatever is available in the entire universe.

We are using the piezo as the reflective element, which contains the potentials within the series resonant closed loop, and does not allow the MRA to "run open" if you load it heavily...it just drops below unity. Actually, the ferrite, not the barium, determines the gain by reaching the point at which it becomes a saturated core, and can't add any more power for additional increases in excess potential.

Barium is curious stuff. There are probably other elements which will work as well or better, depending on their reactivity and optical characteristics. Will keep researching this and report back. ~ Joel

Message 10773 (01/19/95 11:00)
From: Joel McClain
To: Bill Beaty
Subject: Piezo Poling

Hi Bill ~ I THINK that the piezos have to be good, poled parts in order to work properly in the MRA. The DEGREE of poling may alter the gain, because the gain of a MRA will vary from one piezo to another, when using the same magnet and output load.

A quick test has been with the Fluke 87 to measure capacitance, and the "good" piezos measure about 5 nf, but if you reverse the leads, measure 3 nf. The "bad" piezos have less capacitance and no difference when the meter leads are reversed. Also, even the "good" piezos need to be "conditioned" at low signal input for a day or two before they will hold up under an amplifier and a load of any wattage. Conditioning seems to improve the poling by increasing the dielectric strength of the piezos.

I really need some mfr's spec's on these parts to be any more specific about their characteristics. It seems reasonable that poling will result in a standing potential, and this is necessary before the inner, or "p" channel subharmonics can translate into EM. Same effect with the magnet...the process of creating the magnet places the barium into a poled environment, and the inner channel activity will occur whether there is externally applied potential or not. Hope this is helpful. ~ Joel

Message 10790 (01/20/95 14:42)
From: Joel McClain
To: Jerry Decker (Sysop)
Subject: The McKie PODmod...brilliant!

Hi Jerry ~ Just finished reading the McKie patent, or PODmod as it is called. As you know, there are two parallel resonant circuits running at 20 kHz, alternately powering a series resonant circuit running at 40 kHz. Because each tank discharges twice as fast as it charges, the power is amplified because the output current is doubled for half the charge time, with two tank circuits, so the output is constant. The tank circuits offer maximum impedance to source current while the series resonant circuit offers minimum impedance to the load.

Of course, there's more...there is an LR circuit and an LC circuit in the load, so the LR causes voltage to lead current by 90 degrees, which charges the inductor while minimizing current BEFORE the LC circuit "sees" the potential and charges the LC circuit. Remember "Eli the ice man?"? McKie is driving his load almost exclusively on potential ONLY. I read the comparison with the "Tesla Switch" in the KeelyNet file, and by golly, this is what it is happening.

While the LR is discharging into the LC, the next "wave" of potential is getting ready to switch to the LR. As soon as the LC USES the power, the LR replenishes it. Virtually current free potential, made even better with the use of tunnel, or negative resistance, diodes. PODmod is a brilliant application of theory. The patent number, as you mentioned, is # 5,146,395 dated Sept. 8, 1992. We SHOULD be buying these at Wal-Mart by now...do you know if they are in production?

Message 10802 (01/21/95 13:09)
From: Joel McClain
To: Woody Moffitt
Subject: still going...

Hi Woody ~ The drop off in over-unity can occur at either of the "ends" of the operating range, and seems to define the boundaries of operation.

By either increasing load on the secondary beyond the saturation point of the permeable core, or by decreasing frequency until the subharmonics ring out, you can force the MRA below unity. There is an optimum range of output load and input frequency, wherein the nonlinear increase in input impedance creates an effective reduction of primary current, hence input power, for a disproportionately higher amount of output power. The dimensions of this range appear constant in relative terms for differing MRA configurations, although the actual parameters of center resonant frequency and output power will vary with the components. Within the optimum range, the MRA hasn't "rang out" through extended testing to date.

Now, the effects of impedances in a circuit do not relate directly to pure resistance, but the average value of each has the same effect on circuit current. This is especially true of a series resonant circuit because the reactances cancel, leaving only resistance. While this is true within the resonant range of the circuit, the individual effects of Xl and Xc become more pronounced as you move either above or below the center resonant frequency. We wish we had the type of equipment which would allow millisecond-by-millisecond analysis of the MRA with simultaneously monitored voltages and currents, so that we could then plot the coordinates as vectors... lacking that, we turned the MRA over to those who have knowledge superior to ours, and the tools to test the MRA properly. Obviously, we have a great respect for these people and we anxiously await their reviews and analyses.

If there are hidden variables which "average value" testing cannot see, they will be found, and the effects will be clearly defined in terms of power. You know as well as anyone that there are always hidden variables in anything, so it remains to be seen how much they will affect the power gains which we measure as average values. We can use (and accept) Thevenin's Theorem, but we also know Murphy, so reality is somewhere in between. Thanks, dude! ~ Joel

Message 10818 (01/22/95 15:02)
From: David Wyland
To: Norman Wootan
Subject: MRA Experiments

Sources:
Digi-Key (1-800-344-4539) is a great electronics and semiconductor mail order catalog company. Just call the 800 number and they will send you a catalog every month or two. They take credit cards, and they ship in 24 hours. I have used them quite often, and they are good. You already know about these guys, but I thought I would give them a plug anyway.

Newark Electronics (1-800-298-3133 ext. 48) is another good mail order catalog company. Their catalog is much bigger, more industrial and has a wide variety of parts, particularly transistors. Their catalog comes
out yearly and is about 2 thick.

Edmund Scientific (1-609-573-6250) in Barrington, NJ, carries magnets and other scientific equipment for the experimenter and industrial market. They are well known and have been around for a while.

Electronic Engineers Master (EEM) is a four volume set of reference books supplied yearly for free to engineers. The EEM publishers number in NY is (516-227-1300). They list the manufacturers of just about anything that has wires hanging out of it, including crystals and magnets. If you want more info on these, let me know.

EEM shows Morgan Matroc as an ultrasonic crystal transducer manufacturer, pg B-1971 of the 1995 edition, volume B. The pictures and text say they make these type of crystals. You might want to check them out. Their address is:

Morgan Matroc, Inc., 232 Forbes Road, Bedford, OH 44146; 216-232-8600; 216-232-8731 (fax)

McMaster-Carr Supply Company (310-692-5911) is a big industrial supply catalog. They sell everything for the factory including magnets. They have a 2700+ page catalog with 5 pages of Alnico, ceramic and other magnets for industrial use. Alnico rectangular bar magnets go to 1x1x6, for example. These people do quite big, industrial business. The problem will be to get their attention for a small order.

High Power Devices:
You need some high power transistors? They are available. The International Rectifier IGBT (Insulated Gate Bipolar Transistor) devices should do for most anything. The IRGPF40 is rated at 1200 volts at 29 amps for $9.00 in quantity of one from Digi-Key. That's about 35 KW switching in one device. Modules with these voltage ratings at currents into the hundreds of amps are also available. This is overkill as an example. A wide variety of bipolar and MOSFET devices, both NPN (N-channel) and PNP (P-channel) are available for a few dollars at voltages up to 450 volts and several amperes.

Self Powered MRA:
The final proof of the MRA pudding will be self sustaining operation without external power input. If you can get a clean DC Watt out of an MRA from nowhere, you will have something tough to deny. (I know, I have a firm grasp of the obvious.) By pumping out an excess watt = 1 Joule/second, you will quickly eliminate other explanations of where the power comes from, such as using up the energy of magnetization of the magnet, for example. Each day of operation would yield about 90,000 joules. You can compare this against the energy of magnetization of the core, or even against nitroglycerin in terms of
joules/kilogram.

Here are two direct ways for self powering the MRA that I can think of: 1) Make a DC powered sine wave oscillator and amplifier combination to drive the MRA, with the DC power for the oscillator/amplifier combination coming (eventually) from the MRA output. First, you power up the MRA using a battery or other external supply. When the MRA is up and running, you switch over to MRA power. ~ David C. Wyland

Message 10820 (01/22/95 15:52)
From: Jim Uban
To: Norman Wootan
Subject: MRA design ideas w/r/t VTA

Hi Norm ~ I have been avidly following the MRA updates since being alerted to it's existence by Mr. Don Kelly. Congratulations on your and Joel McClain's success! Over the past 2 years I've also been studying Mr. Sweet's VTA system (also with the information help of Don K). The MRA is reminiscent of the VTA and I would guess probably draws from the same energy source, but using a different engineering realization which is much more reproducible. However, Sweet was able to get out much higher over-unity gains.

Perhaps I can offer some design insights from my VTA studies? Two main issues are apparent now. First is the output windings. Sweet was able to get his outputs using what's called 'bifilar' winding for the output coil(s). At the INE conference last May, Sweet's setup was replicated and verified by Mr. Don Watson. I spoke with Don at length, and obtained his design specs (which he has freely given for public domain usage). He also used bifilar windings on the output. Bifilar windings are basically two identical and independent windings cross-connected at the output. One can make elaborate windings where first one layer is wound with one wire, then another layer wound (even in the opposite turn direction) with the second wire. But Don W took a simpler approach of winding from 2 solid-wire spools at the same time. This way, the same amount of identical wire is put on the coil in two independent (and insulated) strands. The outputs are cross-connected. From normal E-M theory, it should not be possible to get any effect in this sort of winding, since any kind of magnetic induction effect would set up a current in each of the two output windings, which would cancel each other due to the cross-connection at the terminus of the wires. However, this is what Sweet and Don W used. Don says his circuit worked well, similar to Sweet's setup. It occurred to me this could well be why you were able to get the MRA only to work with stranded wire. The stranded wire would be acting like a bifilar winding. In that case, the fact that the wires are continually shorted must not make a difference, which goes along with the hypothesis that a different energy than surface-wire electron motion is

what we are dealing with here. However, it may be that a directly bifilar wound output coil would work better than the stranded wire. So I mention it here for your consideration.

The second issue is the magnet itself. The big stopping point for replicating Sweet's setup has been that it requires 'conditioned' magnets. The specs for this had not been forthcoming from Sweet in clear form. (He apparently has given out grains of truth along with a lot of nonsense, perhaps due to legal restrictions or his own inclinations). Anyway, Don Watson has done a lot of work with magnets, and was able to put together an approach that seems to replicate the needed conditioning. Your 1/16/95 note about "looseness of the domains in the magnet" plays directly to this conditioning process. What Don W basically does is mostly demagnetize the magnets using powerful capacitor-pulsed coils around the periphery of the flat slab magnets. He alternates the magnet from top up to top down (talking about the large flat side here), and also varies the tilt of the magnet up to about 30 degrees on the two major axes, giving a pulse or two at each orientation. The goal (as measured with 'magnet paper' which shows the domain boundaries) is to end up with a weakly magnetized magnet that has about 1/2 to 3/4 inches of one polarity (N or S pole perpendicular to the large flat surface) around the outer edge of the flat surface of the magnet, and then the inner section being the other polarity (6"x4"x1/2" magnets). In this way, a 'magnetic bubble' is formed, which is quite visible in the magnetic paper. The second step is to place this magnet between two copper hand-built capacitor plates and charge it to a few KV for a while (I have more specific specs on all this). Don found that doing this step loosened up the magnetic bubble such that a small magnet could easily move it around, as evidenced by the magnetic paper. So, the drive coil (wound normally) could easily wiggle the magnetic bubble (and therefore a lot of magnetic grains in the magnet) to a large degree with a minimal input.

Don Watson's work was only with Barium Ferrite magnets which he found at surplus houses. He found that a VOM can show the difference, where touching any two points on the surface of a BaFe has almost infinite resistance; whereas the now available SrFe has a few megohms resistance. One theory is that the low resistance wipes out eddy currents which dampen the effect. Also, BaFe has better magnetization curves than SrFe for the demagnetizing, bubble-forming process.

Sweet (and Don W) runs the system completely at 60HZ. (The final conditioning step is to pulse the demagnetizing coils at a 60HZ peak a few times). He probably needs the very loosened-up magnetic domains to get the system to work at that frequency. You and Joel have hit on the idea of resonating the magnet at it's natural frequency, which perhaps gets the domains shaking nicely without being so loosened up. However, applying some of these conditioning techniques might loosen up the magnet domains further for greater-output operation at your frequencies also.

I've just received some of the Lead-Zirconate piezos from H&R, and hope to proceed with experimentation here as well. Let me know if you want more specifics on the Watson/Sweet conditioning process.

Message 10831 (01/23/95 03:53)
From: Bill Beaty

To: All
Subject: MRA fm internet 2

Re: Actual test data

Input signal with no-load (MRA not connected) = 27.13 VAC
MRA output load = same Pittman motor @116 ma
Input signal with MRA connected and powering motor = 26.88 VAC
Input signal amplitude reduction as per above = 0.25 VAC
Measured equivalent resistance to achieve 0.25 VAC drop = 1600 ohms

Joel ~ The .25 volt difference mentioned above is only 1 % of the voltages that you are measuring the difference between. Considering that this is in all likelihood about the precision of the meter you are using, it could be out by as much as 100%. Therefore these calculations are meaningless. Furthermore, you do not give any information about waveform, or phase. Although I appreciate that phase between input current and voltage are difficult to determine, if you can't measure input current! Personally for the sake of experiment, I would risk including a small resistor in the input circuit, even if it means reducing the gain somewhat, just to be sure of what is going on. Then once you are sure (i.e. you have measured wave-form, phase, etc., with over unity operation), you can remove the resistor again, for the rest of your experiments. As it stands, your input circuit must already have some ohmic resistance, therefore it is not a priori fatal to the operation of the circuit. A good scope should be able to measure milivolt voltage drops across a small resistor (And with much better accuracy than subtracting two almost equal high voltages). On another point: I was wondering if you could tune the frequencies of your piezos, but putting them under pressure. e.g. clamped between rubber blocks in a small vice. Alternatively, you might include a small adjustable capacitor in series in the circuit, to tune the tank frequency, as is done in digital watches. I suspect
that best results will be obtained, only at very precise frequencies. (Perhaps improving asymptotically as THE frequency is approached). Another thought, if the piezo frequency is a multiple of the magnet frequency, then you might try mechanically coupling the two, to ensure that they resonate on exact harmonics (I suspect that this will further improve the Q factor of the primary circuit). It occurs to me that if this is not the case, then the input impedance will not rise as high, and the gain won't be as high as it might. Next point: I got the impression that Keely was talking about the third harmonic, however you seem to be operating on the second, i.e., 4 times the frequency, rather than 8 times. What happens if you use a magnet frequency of about 4 kHz, OR a piezo frequency of 64 KHz? ~ Robin van Spaandonk <rvanspaa@ozemail.com.au

Message 10835 (1/23/95 07:21)
From: Bob Paddock
To: Joel McClain
Subject: (R) MRA Test

If you insert a resistor or other device in series with primary, it will interfere with the biwave translation which is occurring, and effectively shut down the p-channel. One of the designs I've been toying with uses SENFETS (MOSFETS that have Kalvonic Current Mirror outputs) which should not 'interfere' like a series resistor.

Message 10858 (1/23/95 12:56)
From: Joel McClain
To : Bill Beaty
Subject: Reply for Peter Rietz

In answer to your questions:

1. We believe that barium is a singularity. It is highly reactive, it has a cube lattice structure, and it has a weight of 137. As such, it most easily engages the Coulomb Transverse Potential with the aether, resonates more easily, and can translate more biwave pairs into EM energy.

2. We haven't found any correlation with the physical location of the piezo relative to the magnet, in terms of performance.

3. The shape of the magnet might matter. We don't know because we have been working with the same generally oblong rectangular shape all along.

4. The dominant frequency is the frequency applied. There are other frequencies apparent, similar to the "noise" that you see in a transistor circuit. This "noise" is "riding" on the dominant frequency, and becomes more apparent as the MRA "warms up".

In operation, the MRA is energized at peak resonance for an hour, and then detuned by approximately 140-160 Hz, which causes the effective impedance of the primary to increase by ten or more times, while only slightly reducing the output power. We use an audio amplifier to provide the input, with a signal generator feeding the amplifier. The amplifier has an impedance matching transformer for its output, and we use the highest impedance tap of the transformer secondary.

A sine wave input is necessary, as is stranded wire. We wind the secondary first, and the primary over it. We are using step down ratios of 2:1 from primary to secondary. All of the above is not to say that there are not better ways of doing it...these are only how we are doing it, and other methods may yield better results.

A friend is in the process of building a low power sine wave generator which we plan to use for a self-sustaining mode of operation. We believe that the generator should be able to provide 20-30 VAC at 150 ma maximum (for the warmup), and be tunable within 30-40 kHz. We will use rechargable batteries to start and maintain the circuit.

Good luck to you in your studies. ~ Joel

Message 10880 (1/24/95 10:40)
From: Joel McClain
To: All
Subject: MRA Evaluation by IAS

Late yesterday, I received a fax from Hal Puthoff and Scott Little at the Institute for Advanced Studies at Austin. Hal confirmed the measurements which we had documented for both load and no-load operation of the MRA. However, different conclusions were reached with regard to interpretation of the measurements which do not support over-unity gain.

While we are still in dialogue with Hal and Scott with regard to the interpretation of the measurements, I felt it best to share this information with all interested KeelyNetters, along with a sincere "thank you" to Hal and Scott for their kind and generous assistance in the test of the MRA.

As is often the case, especially with ZPE devices, correct data can lead to incorrect conclusions... this may be the case with the MRA as well, in terms of Norm's and my testing. Looking back, I'm very glad that we shared our data with everyone, as this may help others as a "case in point". Alternately, however, we have requested that Hal and Scott try testing the MRA without adding series resistors in the primary circuit. We think that the addition of resistors might have the effect of blocking subharmonics, which would cause an increase in primary source current. When components are added, it is no longer the same circuit, i.e., it is no longer the MRA, in our opinion.

We will be continuing our work with the MRA, as the most difficult measurement for us to verify is that of primary current. We hope to perform the ZPE "litmus test" with an oscillator to test the ability of the MRA to self-sustain. As with all tests, we will share the test results. My personal thanks to all of you as well, especially Jerry and Bill, for helping to share this and all previous information. ~ Joel

Message 10885 (1/24/95 17:07)
From : David Wyland
To: Norman Wootan
Subject: 2nd half of MRA message

Sorry I got cut off half way through the last message. Here is the rest of it, with some thoughts and data. Here are two direct ways for self powering the MRA that I can think of:

1) Make a DC powered sine wave oscillator and amplifier combination to drive the MRA, with the DC power for the oscillator/amplifier combination coming (eventually) from the MRA output. First, you power up the MRA using a battery or other external supply. When the MRA is up and running, you switch over to MRA power.

Note: the sine wave oscillator/amplifier output voltage must be set by some reference voltage independent of the MRA DC voltage output to prevent unwanted positive feedback.

2) Make a DC powered AC amplifier to drive the MRA, with the DC power for the amplifier coming from the MRA, as above. Have the amplifier input driven by the signal generator through an opto-isolator (or even a fiber optic cable, if you want to spend a few dollars more.) The opto-isolator prevents any power flow from the oscillator to the amplifier. It consists of a LED and a photodiode. Current in the LED causes current in the photodiode. These devices cost

about $1.00 and are available in wide variety. This method allows you to use the signal generator for control but totally eliminate it as a source of power. Eventually, you would replace it with a low power sine wave oscillator on the MRA board.

The amplifier will probably need both + and - DC voltages if you want the sine wave to be symmetrical about ground. (No DC component.) In addition to using a full wave bridge at the MRA output for output power, use two half wave rectifiers and capacitors to generate + and - DC voltages. For the MRA's discussed, this means about +12 & -12 out to the amplifier. A low output impedance amplifier capable of putting out 30 VRMS (~90 V peak to peak) is not to tough to make. You need transistors rated at probably 150+ volts to be safe. The TIP31C NPN and the TIP30C PNP may be good choices. Each are rated at 140 volts Vcbo at 3 Amps with an fT of 4 MHz. If the amplifier voltage output to the MRA is to be 2 to 5 VRMS (~15 V peak to peak => +/- 7.5 volts peak from the MRA power supply) when running, the MRA should be able to power it with no problem.

Instrumentation Thoughts: To measure high voltages, use a 1000:1 probe, such as a 10 Meg and 10K resistor pair. One end of the 10 meg goes to the measurement point, the other to the 10K; the other end of the 1K goes to ground. Have the scope measure across the 1K resistor. This protects the scope, keeps the load on the test point small (0.1 mA at 1 KV) and allows the 1KV+ voltage to be in range on the 'scope. You might want to use a high voltage 10 meg or a string of 2 or more resistors so they don't arc over.

Another approach is to use a 10 pF and a 10,000 pF (.01 uF) capacitor pair, since you are looking at AC. This would eliminate any DC load. Use a high voltage 10 pF cap.

Watch out for the current probes: they add some inductance because they act like a ferrite bead around the wire they measure. They measure current by transformer effect. What you are clipping around the wire is a split ferrite core.

If you are not sure about whether the scope is chopping your signal, cut it back to one channel, unchopped. By the way, chop rates of 100 to 500 KHz are common, and so are chopped scope artifacts if your signal happens to be near some phase locked harmonic of the chop rate.

I hope I have piqued your interest and that we can work together. It looks like fun! ~ David C. Wyland ~

Message 10903 (1/25/95 13:32)
From: Joel McClain
To: Norman Wootan
Subject: More testing, Igor!!

Hi Norm ~ I had a most illuminating conversation with Hal today. I've asked him to keep the MRA for as long as he feels that it has anything to offer him as a device for testing. At this point, he may be about done with it, as it appears not to be above unity. The key to this is not in the reduction of current, which occurs as we have seen, but in the cosine of the phase angle, which changes as the circuit is detuned. Thus it is possible to have a vastly reduced current in

combination with a measurable increase in terminal voltage and still have a relative increase in input power. Reactance, which alters the phase angle, becomes more prominent as the MRA is detuned. Now, I THINK that this is minimal as long as we are within the bandwidth of the Universal Resonance Chart, but I could be wrong.

If this is what is happening, and Hal's test provides data which indicates that this is the case, then the phase angle changes should be directly measurable. I'm not completely convinced, and won't be until we have quantified this. The other indications which we have seen, such as the reduction in output current from the driver xistor of the amp, and the net reduction in AC current to the amp, and the tests with the grain-of-wheat lamps, and other tests, lead me to believe that there is something more going on here.

I mentioned that we are going ahead with the plan to build an oscillator to test the MRA in self-sustaining mode, and that the oscillator must be inductively coupled to the MRA. I've asked Hal to test the MRA using inductive coupling via an isolation xfmr and to omit the series resistor. This would eliminate the local value of impedance, i.e., the resistor, which is replacing the distributed resistances in the tuned circuit. The inductive coupling will provide the same E&I lead-lag relationships which we have in our own tests.

I hope that everyone is aware that I have the utmost respect for and confidence in Hal and his staff. Sometimes typed messages are subject to wrong interpretation, and I really DO NOT want that to be the case here. I genuinely respect them and the efforts which they have given in the test of the MRA. I understand the conclusions which they have reached, and am gratified that they have verified the accuracy of our measurements. Hopefully, this will put to rest all of the doubts concerning the accuracy of our measurements, frequency range of test equipment, etc. We differ only in the interpretation of those measurements as related to input power. I would hope that any inventor of a device of this type would have the advantage of a review by Hal Puthoff. Regardless of the outcome of the review, it is an honor.

As I told Hal, to paraphrase Yogi Berra, "we agree differently"... and that is all. The burden of proof is, as it should be, on the inventors. So we'll prove it; it works or it doesn't...and we'll quantify it either way, and share the results. C'ya. ~ Joel

Message 10936 (01/26/95 09:08)
From: Norman Wootan
To: Norman Comparini
Subject: MRATEST1 Response

Norm: In regard to your question as to our response to the MRATEST1 Report I will go on record with the following comments. First there is a strange "paradox" here that thus far has eluded even the best instrumentation in attempts to explain this circuit. Let say before going any further that I as does Joel personally appreciate the efforts of Hal and Scott in their analysis of the MRA device and look forward to working with them in the future in further testing when we can nail down what is really going on in the circuit. This project is not going to just die out. I personally have 3 ea. "Super MRA devices" on my bench which do some rather interesting things which defy all explanation by conventional "EM" theory. I will stand by my statement that

there is a phenomenon here that has eluded all attempts to explain the circuit even with the most sophisticated "digital equipment". Case in point: MRA that I call "big coil 1"; Input is 80.2VAC @ 798HZ across a "grain of wheat" bulb (glows very dim) with an output of 52.7VDC into a load of 2 ea. (parallel) 48V panel lamps drawing 3.42 Watts at a current of 61.5MA. Will some "electronics engineer" out there tell me how a tiny grain of wheat bulb with 80.2VAC applied across it in series with the MRA circuit pass enough current to drive the observed load of 3.42 Watts? Any and all explanations will be accepted and considered. Wouldn't you agree that something real strange is going on here? To show you that this "DOG" is not going to lay down and die is evidenced by my latest MRA that I constructed last night which does the following: Input, 53.5VAC @ 33,600HZ with an output of 120.2VDC into a resistive load of a standard light bulb rated 120V 13.5 Watts burning very brightly. Input current? Well let's put it this way, I placed a small miniature Radio Shack lamp rated at 6V @ .025A in series with the MRA input and the tiny little lamp was burning very bright while sustaining the output load. Keep in mind that we are dissipating power in the form of heat and light in the series resistive load in the input side of the circuit therefore the question arises as to what is the effective voltage and current across the piezo and primary coil of the MRA circuit. Does conventional "bridge" or series resistance calculations apply. If so then will you figure it out and get back to me as to your explanation. I told you it wouldn't be easy. ~ Norm

Message 10938 (01/26/95 09:46)
From: Joel McClain
To: Norman Wootan
Subject: Circulating Currents

Hi Norm ~ Those are some very impressive figures on the Magnum. Actually, the input current IS as low as it seems...but the phase angle is altered by the reactance (capacitance) of the primary. Since the power factor is the cosine of the phase angle, the input power may be greater than it would appear...even with the lower current. That is the basis of Hal's conclusion, as I understand it.

However, comma, if the phase shift is occurring and is ISOLATED from the source, as with the autotransformer example, then the power increase as a result of phase shift is affecting the power in the MRA only. Therein lies the rub. It APPEARS that this is the case because of the net reduction in AC power to the amplifier (below standby), and because of the extremely high impedance of the primary as seen by the tiny amount of current in the grain-of-wheats, and none of that even considers the effects of mass aggregate resonance.

Now, when the autoxfmrs would short out, the effect would be the same as if either half of the autoxfmr was connected to a one ohm pure resistance: 00000^^^^^^^^00000. With 480 VAC applied, the current coil 1 ohm coil would be 480 amps, and the I*E is 230,400. However, the line fuses still see a net inductance. These fuses are rated at 480 VAC and 100 amps, so their I*E is only 48,000, but they will not blow. The windings heat up and burn out. The massive current in the shorted turns is referred to as "circulating current", because it circulates in the windings as a result of the phase shift across a pure value of resistance. If the line were "seeing" the power in the shorted windings, the fuses would blow...but the line can't see it. There exists a ratio of five times the power which the line "sees" as opposed to the power being dissipated. Is that above

unity? Well, to a fuse or a watt-hour meter it is. Because the MRA drives the amplifier below standby current for the same line voltage, I'd guess that the effect is related.

The isolation is the key...with the autoxfmr, the shorted windings are isolated from the line fuses by the net inductance of the coil. With the MRA, the isolation xfmr of the amplifier is the key...as long as resistances remains distributed... I think. Testing with a self-powering MRA will prove or disprove it, one way or the other. Adding a pure resistive value in the inductive path of the MRA may represent the shorted turn in the autoxfmr...maximum circulating current which the source does not see, but which gives the appearance of a lot of power into the MRA from the source. Hmmm again.

Come to think of it, the autoxfmr example sounds like Russell's device, doesn't it? And the shorted winding seems like a caduceus turn. Anybody can feel free to jump in here! Ideas? ~ Joel

Message 10971 (01/27/95 11:30)
From : David Wyland
To : Norman Wootan
Subject: MRA Testing

Norm ~ Here are some thoughts on MRA testing. I think a critical test is to measure the input current. You could do this by putting a 1 ohm resistor in series with the return lead of the MRA and measuiring the voltage across the resistor with a scope. You can make the 1 ohm resistor out of ten 10 ohm resistors in parallel, which you should get able to get at Radio Shack. Even 5% carbon comps should work to begin with because you are looking for an order of magnitude.

If you have grounding problems between the scope and the amplifier, you could a) float the scope with an isolation transformer (a very handy thing to have for this function), b) run the amplifier off a 12-volt battery if it is the Radio Shack PA system dual voltage amplifier. You could use a lantern battery or run a length of 14 gage Malibu garden light zip cord to the cigarette lighter of a car, or c) make a differential isolation amplifier from an op amp, four 10K ohm resistors and a pair of 9 volt batteries.

Almost any op amp will do: OP-07, OP-27, LF411, LM324, etc. Connect the 9 volt batteries to the +V and -V power terminals. Connect the output to the amplifier (-) input through a 10k resistor, and connect the amplifier (+) to battery common. Connect the remaining two 10K resistors between the 1 ohm resistor and the amplifier (+) and (-) inputs. The scope ground goes to battery common and the amplifier output goes to the scope input. The result is a gain-of-1 differential amplifier, which will eliminate ground loops. (Reference: National Linear Applications Handbook, etc.)

When you check the current, also check the applied voltage to the MRA and try to estimate the phase angle between them. Power = V*I*cos angle.

I got the impression that when you got the MRA in its low input power mode, you could reduce the input drive voltage from 30 VRMS to 3-5 VRMS and still maintain the output voltage. True, or am I dreaming? Good Luck! ~ Dave Wyland

Message 10975 (01/27/95 13:38)
From: Steve Thatcher
To: All
Subject: MRA Piezos

I have been following the MRA development and was searching for sources for piezo crystals. To those that are looking for a source, you might try contacting Morgan Matroc Inc. They are in Ohio and have been in the piezo business for 50 years according to their ads. Their phone # is (216)232-8600 and the address is 232 Forbes Road; Bedford, Ohio 44146. I haven't built the device and haven't dug enough into yet to know what you all are looking for. It appears that this company may have some high power-high stress capable piezos off the shelf so to speak. Let me know if you find anything. ~ Steve Thatcher

Message 10981 (01/27/95 18:17)
From: Norman Wootan
To: David Wyland
Subject: MRA Testing

David you were correct to assume that we had thought out the testing procedure and yes (to answer your question) we knew exactly what the outcome of the test would be by adding a "lump" resistance to the circuit. It kills the over-unity effect "dead as hell". All three of the testing parties were told that this would happen. Now if you would please go back to the starting point and read the whole thing over then you will not come back and suggest placing a "lump" resistance value anywhere in the input circuit to derive a current value. It just cannot be done this way for it completely alters the MRA into as Hal stated "an ordinary series resonant transformer circuit". Put you thinking cap on for there has to be a method of determining input current and not "close the P channel". What would you say if I told you that Joel and I fine tuned a MRA last night and had the voltage and current wave forms exactly 180 degrees out of phase at the input of the MRA? See there is something real peculiar here for between the piezo and the coil the phase angle was 90 degrees. Comments?? ~ Norm

Message 10994 (01/28/95 01:15)
From : David Wyland
To: Norman Wootan
Subject: (R) MRA Testing

I hear you about the lumped resistance. However, some resistance insertion must be possible: at least of the order of the DC resistance of the wires, perhaps 0.01 ohms. This can be estimated by wire tables for 20 gauge wire. With a very small resistance plus an amplifier you should still be able to get a current waveform reading. Having the voltage and current 180 out seems strange… Could be, but I would check by substituting a DC resistance for the MRA to check polarity to be sure. Strange things happen to phase with high Q resonant circuits near resonance.

Note: the MRA circuit must have some effective resistance in it. Real amplifiers have some DC output resistance, closed loop or no. It sounds like the trick is to measure the current without disturbing the circuit. You can still try the current probe too. The ultimate test will be to measure the DC current into an efficient, low power drive amplifier. If the current to the amplifier drops, as (and don't forget to decouple it with a cap to make sure the current you are measuring is DC) you move into the good region, then you are in good shape. The amplifier current method is the ultimate method: the DC output current must be enough to drive the amplifier with some left over for the system to be over unity as a whole. Say again what drive voltage, peak-to-peak you are using? Good Luck ~ Dave Wyland

Message 11037 (01/30/95 00:55)
From: Joel McClain
To: David Wyland
Subject: Black Box Test

Hi David ~ The MRA starts out below unity, and builds up "steam" over an hour. It takes time for the harmonics to reach their peak. You can watch it happen it increments.

The secondary side of the input amp xfmr "belongs" to the MRA, so if you need to add resistance, add it to the primary side. When you add it to the secondary side, you modify the device under test. Look at it this way...if your car starts rolling down a hill, you can stop it with very little resistance at first. You can also stop the MRA with very little resistance at first. That's how transistor circuits are designed so that resonances won't build up and croak them... add a small resistance to stop them when they are still small, so they can't grow.

You don't have to be IN the circuit to measure the power TO it. If you want to "black box" the MRA, don't put anything extra in the box...put it outside (ahead) of the box.

Look at what is going on in your amplifier... transistors forced near cutoff, AC line current dropping below standby. Then look at the nice robust DC power off your bridge. Then go ahead and build the circuit to make it power itself. ~ Joel

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Evaluation of Magnetic Resonance Amplifier (MRA)

Institute for Advanced Studies / EarthTech International, Inc.
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H. E. Puthoff & Scott Little
20 January 1995

Abstract ~

An MRA device provided by Joel McClain and Norman Wooten was tested for power efficiency. The MRA is essentially a power converter, driven by an audio frequency AC voltage and producing a DC output. Our tests included meter measurements, made in the manner

employed by McClain and Wooten, and digital oscilloscope measurements, which provided high-resolution recording of input voltage and current traces. Our meter measurements duplicated the results reported by McClain and Wooten which would appear to indicate over-unity (>100% efficiency) performance at certain frequencies, but only because the reactive behavior of the system is not properly taken into account by this measurement procedure.

The digital oscilloscope measurements, which correctly account for the effects of circuit reactance, yielded a nearly constant 50% efficiency at all frequencies.

Introduction ~

The MRA device we tested consisted of a piezoelectric transducer connected in series with the primary of a specially constructed, hand-wound transformer. The transformer has a ferrite core and the secondary is connected to a full-wave bridge whose output is connected to a load.

McClain and Wooten computed AC input power by determining an equivalent resistance R of the MRA, and then substituting that value R, and the closed-circuit MRA input voltage V, into V^2/R to calculate an input power. They determined this equivalent resistance by substituting a decade resistance box in place of the MRA to find the resistance that would yield the same connected-circuit driving voltage. (Such a procedure is appropriate for purely resistive loads.)

In their most recent tests McClain and Wooten used a small DC motor as a load for the MRA. We used the motor initially to confirm proper operation of our MRA test bed, but replaced it with a 130 ohm resistor to eliminate commutation noise for the tests described below. We also attached a 30,000 microfarad filter capacitor across the load resistor to smooth out the DC to ensure accurate measurement with common digital meters. We used two Micronta 22-185A meters, one in series with the load to measure current, and one connected across the load and the other meter to measure total voltage delivered to the load and current meter. Total output power is the product of these two quantities.

To generate the 34 kHz signal needed to drive the MRA we used a TEK FG504 Signal Generator amplified with a Pioneer H100, a modern solid-state 160-watt audio power amplifier without output transformers. To duplicate the performance of McClain and Wooten's Radio Shack MPA-45, 35-watt amplifier, we had to add series L (34 microhenries) and R (11.68 ohms) to our amplifier.

Without the series R we only observed a 0.10 volt droop when driving the MRA at resonance (McClain and Wooten's amplifier exhibited a 1.58 volt droop under this loading).

Without the series L the anomalous effects were still present but substantially lower in magnitude than those observed by McClain and Wooten.

With our amplifier thus modified by the addition of these elements, we have duplicated the McClain-Wooten driver amplifier setup precisely.

We used a LeCroy ScopeStation 140 100MHz digital oscilloscope with simultaneous sampling on 2 channels to measure MRA input voltage and current. Current was sensed as the voltage drop across the 11.68 ohm resistor placed in series with the amplifier output. This resistor was made by placing two 22 ohm, 2 watt carbon comp resistors in parallel to provide the desired resistance with a minimal inductance.

Procedure ~

We conducted a series of measurements at different frequencies. At all times the MRA was connected to the 130 ohm load resistor. At each frequency we made the following measurements with the MRA connected to the AC signal source:

f source frequency (measured with a Fluke 87)
VinMRA voltage across the source terminals with the MRA connected (Fluke 87)
Vout DC voltage across the 130 ohm load resistor and current meter (Micronta)
Iout DC current through the 130 ohm load resistor (Micronta)
Vin digital recording of the input voltage trace covering about 4 cycles (LeCroy)
Iin digital recording of the input current trace simultaneous with Vin (LeCroy)

At each frequency we also disconnected the MRA and measured:
Vopen the open circuit voltage of the source (Fluke 87)

We then connected a decade resistance box across the source terminals and by trial-and-error determined:
Requiv the resistance required to produce the same driving voltage as with the MRA connected

Results ~

The following table shows these measured quantities for four different frequencies, beginning at resonance and then decreasing.

f (kHz)	VinMRA	Vopen	Requiv	Vout	Iout
33.84	21.06	23.36	140	18.68	.1324
33.56	23.84	24.04	1900	15.02	.1068
33.34	24.20	24.10	negative	9.75	.0696
32.47	24.58	24.26	negative	5.28	.0377

The first entry in the table is at resonance and is characterized by the highest Vout value. The second entry has Vout at approximately 85% of the maximum value as suggested by McClain and Wooten. The digital data for Vin and Iin are not presented in this table in the interest of brevity. The several pages of digital data generated for each line in this table are, however, available upon request.

The next table shows the results of the power calculations, both by the V^2/Requiv method used by McClain and Wooten, and by the averaging of Vin times Iin using the digitized data. Also tabulated are efficiency figures for each method (i.e., output power divided by input power).

f	DC output	V^2/Requiv	avg Vin*Iin	Mc-W eff	Vin*Iin eff
33.84	2.473	3.168	4.566	.78	.54
33.56	1.604	.299	3.265	5.36	.49
33.34	.679	negative	1.467	negative	.46
32.47	.199	negative	.401	negative	.50

The figures in columns 2 - 4 are in watts. The last two columns contain ratios. The column labeled "Mc-W eff" is the power efficiency calculated by dividing the DC output by the McClain-Wooten input power V^2/Requiv.

Discussion ~

The second row in the table shows the condition that McClain and Wooten interpreted as over-unity performance (e.g., an efficiency of 5.36). The problem lies in the value of 1900 ohms for Requiv. This value was obtained because of the small voltage change between open- and closed-circuit conditions (24.04 to 23.84) measured at that frequency. Note that at even lower frequencies, the source voltage was observed to actually increase above the open circuit voltage when the MRA was connected... a condition that McClain and Wooten also observed but did not attempt to analyze. At first glance this could be interpreted as evidence that the MRA was now feeding power to the source.

However, this behavior is exactly what is predicted by classical AC circuit analysis when a load with a net capacitive reactance is driven by a source that has a net inductive reactance. Since the MRA is essentially a series LC circuit, at frequencies below resonance it will exhibit a net capacitive reactance. The audio amplifier used by McClain and Wooten has an output transformer which, at the MRA operating frequency (substantially higher than the middle of the audio range), will exhibit a noticeable inductive reactance in its output impedance.

With such a combination of reactances one cannot, using only the magnitudes of voltage and current, determine the actual power being transferred to the MRA device. In particular, the Requiv method fails as one detunes from resonance because it ignores the effect of reactance. Such reactance creates a phase shift between voltage and current, a fact well-known in the electric power industry as "power factor."

For example, if both voltage and current are sinusoids, true power is given by V*I*cos(A) where A is the phase angle between the voltage and current waveforms. An equivalent method, which is more general because it is applicable to any waveform, is to average the product of the voltage and current waveforms over an integer number of cycles. This is the method we used to obtain the values in the second table in the column "avg Vin*Iin".

Conclusion ~

Based on the results of our experimentation and analysis we find that the MRA device provided by McClain and Wooten does not produce over-unity-efficiency results. The MRA circuit behaves instead as one would expect of a loaded transformer with a series capacitor in the

primary circuit. When the MRA is detuned from resonance to frequencies slightly below resonance, the observed changes may give the impression that the MRA then draws unusually little power from the source while nonetheless maintaining a healthy output. This impression is false. True power measurements show that the MRA continues to draw about twice as much power from the source as it delivers to the load.

Error Analysis of MRA Test Results

Institute for Advanced Studies / EarthTech International, Inc.
Scott Little & H. E. Puthoff
1 February 1995

Introduction ~

This analysis refers to MRA test results we presented in a separate report dated 20 January 1995 (MRATEST1.ASC on KeelyNet). These results were based upon measured values of voltage, current, frequency and resistance. In this addendum, the magnitude of experiment error associated with these measurements is discussed and quantified. As will become evident below, the error analysis does not detract from our original conclusion, but rather strengthens it.

Data ~

The tables below are reprinted from the original report:

f (kHz)	VinMRA	Vopen	Requiv	Vout	Iout
33.84	21.06	23.36	140	18.68	.1324
33.56	23.84	24.04	1900	15.02	.1068
33.34	24.20	24.10	negative	9.75	.0696
32.47	24.58	24.26	negative	5.28	.0377

f	DC output	V2/Requiv	avg Vin*Iin	Mc-W eff	Vin*Iin eff
33.84	2.473	3.168	4.566	.78	.54
33.56	1.604	.299	3.265	5.36	.49
33.34	.679	negative	1.467	negative	.46
32.47	.199	negative	.401	negative	.50

Analysis ~

The data in the second line in these tables is of particular interest. That is the frequency at which the input power determination suggested by McClain and Wooten yields an efficiency of 536% whereas our input power measurement yields an efficiency of only 49%.

Let us examine the individual errors that contribute to the total error in our efficiency measurement (i.e., the 0.49 value that appears in the column labeled "Vin*Iin eff" in the second

table). This value is the ratio of the DC output power (1.604 watts) to the AC input power (3.265 watts in the column labeled "avg Vin*Iin").

The DC output power value was obtained by multiplying Vout by Iout. Both of these measurements were taken with Micronta 22-185A digital multimeters. The Vout meter was connected across both the 130 ohm load resistor and the current meter so as to include the voltage drop across the current meter so that the power dissipated in that meter would be included in the DC output power determination. It should be noted that a small amount of power, not included in our original determination was dissipated in the Vout meter itself. This meter has a 10 megohm input resistance and, at the15 volts present in the 2nd observation, was dissipating 22 microwatts. This should be added to the result of Vout*Iout to obtain the total output power. For the 2nd observation, this omission results in a 0.001% underestimation of the output power, an error that will be seen to be insignificant when compared to the errors in Vout and Iout which directly affect the DC output result.

The mfgr's literature on the 22-185A meter indicates that our Vout measurement accuracy was +/- 0.8% relative and the Iout measurement accuracy was +/- 1.5% relative. These errors are independent so they add in quadrature to yield a +/- 1.7% uncertainty in the computed DC output (Vout*Iout).

The errors in the avg Vin*Iin values are more difficult to characterize. The digital scope manufacturer's stated voltage measurement accuracy does not completely describe the errors that occur when two different waveforms are recorded by the scope and multiplied together. There is a finite amount of non-simultaneity (i.e., jitter) in the sampling of the two channels. When the two traces are multiplied together, the resulting error will be highly dependent on the actual waveforms being sampled.

Therefore we elected to determine the error in the avg Vin*Iin value empirically. Ten sets of current and voltage waveforms were taken from the MRA device after it had been operating for about an hour to ensure thermal equilibrium. The operating conditions were similar to those in the second line of the data tables. The results of the Vin*Iin averaging for the ten sets were as follows:

3.26
3.24
3.25
3.20
3.20
3.29
3.16
3.24
3.18
3.27

The observed standard deviation in these values is +/-0.042 watts. This is 1.3% of the mean value.

Combining (in quadrature) this error with the 1.7% error in the DC output power, we get a 2.1% relative error expected in our "Vin*Iin eff" values. That is, the 0.49 in line 2 should be interpreted as 0.49 +/- 0.01.

Therefore, there is virtually zero chance that the conclusions presented in the original report were wrong due to experimental error. Our measured efficiency is 0.49 +/- 0.01. The McClain-Wooten value of 5.36 is 487 standard deviations away from our value. The probability of our reading being a chance observation, assuming that such readings exhibit a normal distribution, is astronomically small.

Clarification of MRA Test Conditions

Institute for Advanced Studies / EarthTech International, Inc.
Scott Little & H. E. Puthoff
3 February 1995

A number of persons have commented upon one particular aspect of the test conditions we employed to generate the data presented in our original report, namely the resistor we placed in series with our amplifier output.

It should be noted that this resistor is controversial because the inventors of the MRA device have repeatedly claimed that, when they add such a resistor, the over-unity performance of the MRA is significantly diminished.

As we emphasized in our original report, we conducted our tests with a Pioneer 160 watt power amplifier that had a much lower output impedance than the 35 watt Radio Shack amplifier used by McClain and Wooten. The resistor we added should be considered only as a modification of our power amplifier to make it match McClain and Wooten's amp.

Some people have suggested that the presence of this resistor is the reason that our MRA device did not produce over-unity results. This is not the case. With the resistor present we observed the same over-unity results claimed by McClain and Wooten when we used their measurement procedure. Specifically, at a frequency just below resonance, where the DC output is about 85% of maximum, we demonstrated with our equipment that the McClain and Wooten method of input power determination yields an efficiency of 536%. In other words, we reproduced the results of McClain and Wooten perfectly. The MRA worked just as they claimed it would. At the same operating frequency we recorded high-resolution traces of input voltage and current with our digital scope and used them to compute the true input power to the MRA. This data showed the MRA to be only about 50% efficient.

Therefore it was not a matter of MRA performance but a matter of measurement technique that disconfirmed the over-unity results.

In our original report we explained why the methods of McClain and Wooten yield erroneous results. For the basic AC circuit theory that underlies our discussion we would recommend any of a number of excellent texts on this subject, for example "Principles of Linear Networks" by Friedland, Wing & Ash, McGraw-Hill, 1961

MRA2: Magnetic Resonance Antenna?

Further research by Norman Wootan, Joel McClain, Robert D. Taylor and Tim and simplified version.

28 Aug 1995

Tapping A New Ambient Power Source By Resonant Ecitation ~

It has been discovered that an apparently hitherto unknown or unexploited source of ambient power exists everywhere on earth (extrapolating from experiments in Atlanta, GA and Austin, TX!) and from which essentially "FREE" energy can be extracted at almost no cost, merely by using the Key Concept in the Wootan/McClain discovery, namely external armonic excitation of a saturable core transformer, which causes it to act like an Antenna that extracts ambient energy in amounts 19 times or more than the energy required for the harmonic excitation. Indeed, the original MRA design continues to work and to exceed all original expectations.

In the MRA2 configuration, even when the piezoelectric capacitor has been removed and even when the primary resonant circuit has been cut, it still continues to produce verifiable output power! All that is required is a single wire from the AC Signal Generator to the saturable-core transformer of the original MRA disclosure in order to cause useful power to be generated in the secondary circuit in amounts vastly greater than the power input from the harmonic Signal Generator.

This appears to be an electrical analogue of the chemical phenomenon of Catalysis, namely the periodic pulses of energy into the transformer 'catalyze' the transformer's nature so that it operates in an apparently hitherto never before seen mode, namely it behaves like a novel 'Antenna' which is extracting AMBIENT ENERGY from "somewhere"! It is not necessary to understand completely at this time what the source of Ambient Energy may be, in order to exploit the phenomenon in an environmentally benign way for the benefit of mankind.

Numerous maverick scientists and engineers have suggested that there may be hitherto unknown aspects of electromagnetic radiation not comprehended in the standard Maxwell's Equations, such as the controversial "scalar waves" postulated by retired Air Force Colonel Tom Bearden.

Retired physicist Greg Hodowanec, who duplicated the MRA independently after learning about it from the New Energy News newsletter, which reproduced the internet announcement of Wootan and McClain, suggests that the ambient energy comes from the earth's gravitational field and is somehow being converted into electrical energy.

Former BYU professor of Physics & Astronomy, Dr. Bob Bass speculates that MRA2 (as was the original MRA1) may be somehow tapping the ambient electromagnetic energy known to exist in the Earth-Ionosphere Cavity in the form of Schumann Resonances which are continually resupplied every time a lightning bolt from a cloud strikes the earth. "As explained in the Second Edition of Jackson's classical book on Electromagnetism, the great genius Nikola Tesla discovered the Schumann resonances experimentally 50 years before Schumann predicted them theoretically," says Bass, who adds that he once calculated that "every cubic meter of space near the surface of the earth contains on the order of one kilowatt of standing waves, similar to those in a microwave oven except at vastly reduced frequencies, which no one knows how to extract efficiently." Or do they? The late Utah inventor Moray, author of a book entitled "The Sea of Energy in Which the Earth Floats", astounded famous scientists in the 1920s and 1930s with never-explained demonstrations of his ability to extract 3 kilowatts from 'nowhere' at will, anywhere (even randomly selected points in the desert), using his unexplained Moray Valve. Moray submitted a Patent Application, but withdrew it and his secret died with him. Admirers of Moray point out that his writings included the words "Germanium triode" decades before the Transistor was discovered by Bell Labs scientists (who won a Nobel Prize) and who had been directed into solid-state physics by the late Harvey Fletcher, who had earlier witnessed Moray's work and been shown every detail except the secret of the vest-pocket-sized Moray Valve.

A recent controversial theory of Austin Institute for Advanced Study physicist Hal Puthoff and his collaborators Haisch and Rueda appears to explain gravity as not an intrinsic property of matter but as an indirect consequence of Maxwellian electromagnetic radiation, namely that (as earlier suggested by the late Russian dissenter Sakharov) gravity is a "shadow effect" similar to the accepted Casimir Effect of quantum electrodynamics. Bass points out that if the Haisch-Puthoff-Rueda theory is correct then Hodowanec's idea of tapping the earth's gravity field in some electromagnetic way not hitherto suggested is conceivable.

Whatever the Ambient Energy Reservoir into which the MRA is tapping, the novel phenomenon is real and deserving of exhaustive further investigation, according to elated inventors Wootan, McClain, Taylor and McCracken, who urge independent investigators to seek to replicate their discovery.

Parts Sources For The MRA

Joel and Norm now report that stranded wire seems to be required in order to see the strange effects.

The transducer used in the Keelynet device was obtained from a surplus source local to Texas. We're trying to track down more of them. They apparently came from an industrial plastic welder.

A Lead Zirconate Titanate piezo transducer can be had from H&R Corp, but its dimensions are: 2" dia x 0.1" thick, not the same as the original Keelynet device. It has a 45KHz resonance. Will it work? Dunno. They have several hundred in stock.

H&R also carries numerous ceramic magnets, but it's unknown whether or not any are close enough to Norm's original that they will work. They offer one large ceramic magnet, 4 x 3 x 1", and have only about 50 in stock. This magnet has its poles on the flat magnet face, and has TWO poles on each face.

At least two kinds of ceramic magnet exist: Barium ferrite and Strontium ferrite. It is not known whether both types work in this device.

H&R Co.,18 Canal St <---- This place has a GREAT surplus mail order catalog!
PO Box 122, Bristol, PA 19007-0122
800-848-8001

Joel McCLAIN & Norman WOOTAN

Magnetic Magnetic Resonance Amplifier

[KeelyNet Message Collection # 2]

MRA FIle # 1

Dan Davidson: US Patent # 5,568,005 ~ Acoustic-Magnetic Power Generator

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10/09/94
From: JOEL MCCLAIN ~ To: JERRY DECKER
Subject: Piezo Test

Hi Jerry: You remember those piezo's that you got from Tanners'? I've been testing one of them, and have seen an "anomalous" effect, so maybe
some of the other experimenters will try. I put one of the piezos on the top of a CB antenna, and connected the antenna to a square wave generator. I tuned the generator until the piezo started to "sing", and put a 'scope on it. At 7480 Hz, the peak sine wave output from the piezo is 8 volts at 37430 Hz. In other words, frequency is being multiplied by a factor of 5.00 times, and voltage is going from millivolts of radiated signal to eight volts peak to peak. More interesting is that when the piezo is resonated at 37430 Hz, the output goes up be 50 times to 400 volts.

If this can be duplicated, we may have a way to use piezos to convert earth's naturally occuring background radiation into useful energy. ~ Joel

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12/03/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Ferromagnetic resonance

Hi Norm: Since the Nieper ring exhibits anti-g characteristics, it seems to me that the free-running freq. should relate in some way to the resonant freq. of ferromagnets. That freq. has been listed as 170KHz or 180KHz, depending on whose file you read. I injected signals into the base of a Nieper ring xistor until the collector signal locked on at 174,800Hz and froze the display on the scope. So, IF my assumption is correct, the ferromagnetic resonant freq is 174.8KHz, as measured of the Simpson 710 counter. ~ Joel

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12/03/94
From : NORMAN WOOTAN ~ To: JOEL MCCLAIN
Subject: Feromagnetic Resonance

Joel: Now that you have nailed down the freq as 174.8KHZ it is interesting that this verifies what I have been pounding on the desktop for years now the fact that Nikola Tesla's big coil out in Colorado Springs was tuned to around 170 KHZ. Coincidence, never: Tesla knew the Ferro Resonant freq very well. I will bring to you a 50 Watt RF Linear amp and my Wavetek function generator which has 8 different wave forms and will go up to 30 MegHZ. We will try to "levitate" some barium ferrite magnets or do a little "harmonizing" with them with some special coils which I would like to try. Just maybe the "Sparky Sweet" phenomenon is not that hard to do. ~ Norm

[Hans Coler's "Stromzeuger" & "Magnetstromapparat" = 180 KHz]

12/03/94
From: NORMAN WOOTAN ~ To: JOEL MCCLAIN
Subject: Ferromagnetic Resonance

Joel: I set up an experiment to verify what you had found as follows: I placed a piece of Neodymimum magnet material into one of my TET multi
resonance coils and got an output of free resonance of 174.925 KHZ. I then placed into the circuit in "parallel" one of the barium titanate
transducers with an alnico bar magnet through the center hole which immediately tripped the circuit into free resonance at a freq of 349.850 which is one octave higher. The scope locks on and the freq counter is very stable. The RF coming off the TET coil sure screws up the lower bands on the TV. I will bring out to you the while set-up later this weekend. Very interesting. ~ Norm

12/03/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: (R) Ferromagnetic Resonance

Hi Norm: Excellent squared! Here's the latest on the 'ring': Using the freq. counter to measure the major component of the Nieper ring output, as it is a complex waveform with harmonics, the output is 1.1MHz. The counter may be averaging somewhat, but the ring was reported to drop off from 1.3 MHz after warming up. This seems to be about par. Been thinking that the resonance may be electromechanical as opposed to purely electrical... Since the constant in all versions of this circuit is the TO3 case xistor, perhaps there is a 'ringing' within the case cavity. Will have measure a TO3 and apply cavity resonance equation to determine this.

12/03/94
From: NORMAN WOOTAN ~ To: GERALD O'DOCHARTY
Subject: Ferromagnetic Resonance

Gerald: Maybe you could provide some input to this puzzle. Joel and I are building the Neiper Ring transistorized circuit which is reported
to loose 15% of it's weight when it enters free resonance. This project led Joel into the investigation of the resonance freq of ferromagnetism. Remember Tesla's coil was designed for somewhere around 170 KHZ. Corum calculated the values as close as could be determined from available info. After Joel did his test and got 174.8 KHZ, I set up a similar test but used what we refer to as a multifreq resonant coil which I must confess is my own "rube-goldberg" device. Basically it is a tetrahedron coil which has each of the 6 edges 12 inches in length with 26 turns of #30 silver polyeese covered wire. The coil is wound in a full tetrahedron shape with one continous wire with no breaks so that you have in the base plane of the geometric shape of a tetrahedron a current which goes in one direction and creates a magnetic plane with North pole above the plane and the South pole below the plane when current is sent into the coil in one direction and the poles reverse when the polarity is reversed. What is interesting is that the vertical legs of the tetrahedron contain 26 turns of wire with current going in both directions or a total of 52 turns. The input and output wires enter and exit the whole coil at the verticies of the TET. This coil will resonate with about any freq in the area and when amplified will pick up even the faintest magnetic disturbancies. For example, I can attach my scope to the coil with no amplification and pick up the paterns of data from my printer while it is running in the next room. When everything is absolutely quiet it will sit there and pick up a background signal around the 170KHZ freq which I always thought was caused by the earth's magnetic flux. By placing a Neodymimum magnet inside of the coil and injecting a signal from my Wavetek signal generator into it I looked for a freq which gave me the maximum gain on the scope which turned out to be 174.925 KHZ. I next wanted to back-up the figure so I placed a round bar of alnico 5 magnet material about 1 inch long and 1/2 inch in diameter in one of the barium titanate transducers (which you were blowing up). When you ring these transducers they will go into free resonance. The alnico provided a reference freq and when placed on to of the Neodymimum

magnet the circuit tripped into a powerful free resonant freq of 349.850 Khz which is one octave higher than the previous freq. This whole experiment is still not conclusive and needs attention from others like yourself and Dan Davidson. Bert's interest is "tweaked" along with several others like Bill Beaty. I'm sure Woody will "get off" on this one also. More later. Will appreciate input from all interested in this worthwhile experiment. ~ Norm

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12/04/94
From: NORMAN WOOTAN ~ To: ALL
Subject: Ferromagnetic Resonance

When Joel started "poking" around with nailing down the natural "ferromagnetic" resonant frequency we were refining the Neiper Ring circuit which looses weight when it runs in free resonance. What Joel wanted to do was match the free running freq of the Neiper Ring to the natural resonant freq of the earths magnetic field, voila, gravity cancellation. With our numbers it may soon be possible to build a "Sparky Sweet" type of coil with a tickler running off freq by just enough to cause the full cancellation and boost of a permanent magnets field 120 times a second which will yield 60 HZ sine wave out of the power coil. If you all will go to the Nikola Tesla book "Complete Patents" and go to page 176 you will find Patent # 413,353 dated Oct. 22, 1889 in which Tesla designed and built a permanent magnetic device which would rectify or convert AC to DC to drive the existing street lights of New York which were DC arc lamps until the AC powered incandescent bulbs were installed. See, he provided AC power to the city before the lights could be converted or replaced. Being an ingenious fellow he simply came up with a simple rectifier long before the selenium types were even thought of. This principle is easy to understand for it is basically the familiar "buck-boost" where we cancel then boost the magnetic flux in "counter magnetic" fields. We have now two projects springing out of one. First being the original "enhancement" of the anti-gravity tendacies of the Neiper circuit and the fabrication of a "Sweet" type of ZPE generator utilizing the findings. We welcome all in "E" to join the hunt so to speak. There is room for all to learn from this. ~ Norm

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12/04/94 23:19
From: JOEL MCCLAIN ~ To: ALL
Subject: Easy Weight Loss

Norm brought over his Dec-O-gram precision scale, and we used it todetermine whether the Nieper ring would become "lighter", as was reported in the New Energy News. It does work... weight loss wasmeasured to be 350 milligrams, as opposed to the maximum loss of 500 milligrams that N.E.N had seen. The weight loss occurs over a periodof about 15 to 20 minutes, also as reported. However, the weight gain after the circuit was deenergized took considerably longer. After about 20 mimutes, only 200 mg had been regained, at which point we disassembled the test setup for another test. We will upload a file with the circuit description if anyone wants to try this.

12/05/94 10:27
From: JOEL MCCLAIN ~ To: ALL
Subject: Nieper Ring = Tetrahedron

First it had to be verified that the Nieper Ring worked as described by both Nieper and the N.E.N evaluation. Next, it has to be understood why this anomolous reaction occurs. Questions: (1) Why use audio power transistors in a circuit that is going to "run" at 1.3MHz? Transistors are designed around an "alpha cut-off frequency", which is five times the maximum expected frequency to be used. For an audio xistor, that is 5 X 20KHz, or 100 KHz. The xistors are over ten times out of their range. (2) Why use a fixed bias to drive the xistors into hard conduction with no input except capacitive coupling from a previous stage? Why use common emitter configuration, which is capable of the highest power gain, but with a collector load resistor value so low that power gain is negligible? (3)Why drive the xistors into a collector load value that is so low that both the xistors and the load resistors become hot? Since the weight loss only occurs after about 15 minutes, does the accumulated heat play a part in this effect? (4) Why use three stages, coupled from output to input? Does it make any difference how many stages are used? Is more better? (5) Why does the circuit free-oscillate at 1.3MHz, or oscillate at all for that matter? Why is the collector signal a mixed bag of harmonics? What does 1.3MHz have to do with gravity?

Answers (I think): (1) Silicon atoms form a crystal lattice structure, and the crystals are tetrahedral in shape, with each of the four valence electrons forming a covalent bond with each of the four adjacent atoms. This is the key to understanding the Nieper Ring. An audio transistor in forced conduction with no input signal is stressed by the biasing potential. As heat builds at the junction, the lattice structure begins to resonate at its' own frequency, ie, that of a natural tetrahedron. Using audio xistors is effectively a low-pass filter, keeping out high freq noise or ambient signals. (2) The Nieper Ring design produces junction heat, but within the design parameters of the xistors. Potential and heat provide the stress which permit the tetrahedral resonance. (3) Accumulated heat over time allows the silicon to reach the level of resonance which is limited by the collector load resistor. (4) There is a natural symmetry to the circuit. Viewed as a point-to-point diagram, the ring is a Delta-T, or tetrahedron. Viewed as a conventional schematic, this is not apparent. However, if you WIRE it point-to-point, you are building a tetrahedron of material which is tetrahedral in its' atomic structure. Three xistors form the base, and the EB and CB networks meet at the B+ point, which is the fourth corner of the tetrahedron. (5) The output "waveform" is a complex wave, whose major component is approx. 1.3 MHz as measured on an oscilloscope. However, using a frequency counter, the AGGREGATE frequency is 1.1 MHz, and using signal injection at the xistor bases, the waveform will peak at harmonics of the 1.1MHz aggregate. One of those harmonics is the ferromagnetic resonant frequency used by Nikola Tesla, and it is this harmonic which may be responsible for the weight reduction. The small level of this harmonic, at 1/6 of aggregate resonance, is nevertheless amplified in effect by a factor of 1000 because it is incorporated into a resonant tetrahedral lattice structure. The EFFECT is measured by the weight loss.

I see this circuit as a spinning pyramid, where the walls (electrons) are forced to spin in a tetrahedral pattern, creating a vortex at the natural resonance of a tetrahedral lattice. The walls appear to be stationary, but the material that forms the walls is moving, as if the walls were hollow and water were being pumped through the void.

There are many potential uses for this circuit... it is an excellent investigation tool, and with no further modification, is a natural gravity detector. It could also be used to test time = gravity, by placing a synchronized watch into the field, and observing changes that occur. I'm sure that there are many other uses, but those two come to mind. The Nieper Ring is essentially a passive device. Actively "pumping" the output via an external amplifier may result in even greater effect, provided that the input impedance of the external device is high enough not to disturb the naturally occuring resonance. ~ Joel

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12/05/94
From: NORMAN WOOTAN ~ To: GERALD O'DOCHARTY
Subject: Tetrahedral Coil

Gerald: The inspiration behind the construction of my coil is really bizarre to say the least. Nick Holden (WACO- Buckey-Ball manufacturer)
and I met a lady that claims to have ridden on an alien space craft during which time she was told that the flight physics was based on
TETRAHEDRAL geometry. She was told that the tetrahedron was rotated "virtually" which extracted enery directly from the aether or space
vacuum. My design was based on her discription and incorporated a scalar vector cancellation in the vertical legs of the geometric figure. This electrical and magnetic field cancellation can be verified by the total absence of magnetic flux along the legs of the TET while under considerable power. There is a very powerful base plane magnetic field created which revolved at extreme RPM (virtual rotation). I have one version that Joel is doing some test on that is a full nested pair of TETs to model the earth or any other spherical object. Will keep you informed of test results. When the nested TET is run you get a North pole magnetic plane at the 19.5 degree north latitude line and a South pole magnetic plane at the 19.5 degree South latitude line similar the the earth magnetic fields and the energy upwhelling regions that have been described in various books. ~ Norm

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12/05/94
From: NORMAN WOOTAN ~ To: JOEL MCCLAIN
Subject: Ferromagnetic Resonance Transformer

Joel: This morning before going to work I spent a little time and wound a 200 turn coil on the 3 inch long permanent magnet (alnico 8) and placed this coil inside of the larger coil (same as the coil I gave you). When this permanent magnet core coil is driven with my signal generator (.5 V output) at exactly 174.9 KHZ the output coil will light up a neon tube. If you get off this freq

nothing will pass through the transformer for the permanent magnetic field cannot be overcome by the "feeble" input. Need some more investigation here. My intent is to drive the input coil at a freq that will cause a difference (beat) freq of 60 HZ between the input freq and the ferromagnetic natural resonance freq. More later. ~ Norm
PS: with .5 V input I am getting out 60 V

12/08/94 13:19
From: JOEL MCCLAIN ~ To: ALL
Subject: Nested Tet, Cube and Phi

Built a double tetrahedron as a nested pair. In the process of doing this, I noticed that when rotated 45 degrees, the nested tet is a cube in which each square side is divided into four equilaterals. This provides an 8:1 ratio, or octave, which is at right angles to the octave formed by the sides. Reminded me of the "Law of Squares" book by Searle, and Keely's mention of using freq's at right angles for resonance. Seen from this angle, the double tet is both a Lissajous and a caduceus... but when rotated back "up", the double tet is "earth", as viewed from the perspective of the grid ley lines.

There's also an interesting Phi relationship, because the Phi overlap from one square to the next is 0.618, and that is 0.118 more than the half which it intersects, which in eight rotations produces one whole "virtual" rotation. This virtual ninth is, I think, interdimensional because it does not exist in 3-D, and may be the gateway to ether or ZPE when the nested tet is at resonance. Anyone who has already been down this road, feel free to jump in here... Jerry?

12/09/94
From: NORMAN WOOTAN ~ To: JERRY DECKER
Subject: Tets, 4 Wave, 6 Path

Jerry: Do you remember drawing a little diagram of a tet and a diagram of the wave flow 4 wave 6 path? I looked at this diagram and it is exactly what Joel is seeing in the nested tet. When I built my nested tet, before I tied off everything into a complete 3D "Star of David" configuration, also the same configuration as the "nested" tets form inside the earth I could rotate them within one another and see what Joel is referring to as the "definition of a cube". These are very interesting little figures to play and are very revealing when you can play in 3D space with them. ~ Norm

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12/09/94
From: JOEL MCCLAIN ~ To: ALL
Subject: Magnet as Battery

Using Gerald's analogy of visualizing a spring in compression and expansion at the same time, I'm trying to understand magnets. I think of magnets as batteries which we don't know how to "connect" to, yet.

Magnetizers electrically "slam" material with capacitive discharges. Material is energy is "solid" form. The "slam" compresses and expands the energy/material, resulting in an imbalance. The "outside" continues to try to compress while the "inside" is trying to expand. That may be why magnets fracture so easily, and why each chip, as in a hologram, retains all of the characteristics of the whole. A magnet is in a constant state of trying to collapse into itself, which is why it attracts ferrous materials which match the patterns of its own lattice structure.

The "domains" of a magnet are each holographic miniatures of the whole magnet, held together by the molecular structure of the magnetized material. When a domain flips, as in the VTA, it reverses the compression/expansion, releasing electrons from the material. Sweet has learned how to "connect the battery"... just reverse the process of magnetization slowly, and collect the electrons that are released via sympathetic vibration. Even if you could collect just the amount of energy that is contained in the expansion/compression, without any of the catalyst electrons, magnets would be excellent, rechargable power sources.

The problem is that the amount of power needed to "excite" the domain structures of most magnets exceeds the power out. That is why it is
important to find magnetic resonance as a method of "tripping" the domains into a controlled energy expansion. All domains, regardless of the type of magnet, respond to 175KHz, indicating that they all share the same lattice structure. This is a start, but it is not the "aggregate". Maybe acoustic vibration at the cavity resonance of a magnet would also "loosen" the domains, if it were in phase with the electrical resonance signal. Maybe the resonances have to be applied from within the magnet to reverse the externally applied force which created the original imbalance. A round, hollow magnet... like earth, would permit this.

12/09/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Barium Ferrite Beat Freq.

Hi Norm: I've found a way to "tickle" the barium ferrite magnets... you can get any output freq you want as a result of the "beat" freq between 8KHz and 174.9KHz. A barium ferrite pair resonates audibly loudest at exactly 8KHz. I'm using your spool of magnet wire inside the gap between the halves to turn the magnet into a "speaker", and you can hear it "sing". The coil is connected to 8KHz from a sig gen.

Wrap a primary coil around one of the halves, and connect it to the other sig gen running at 174.9KHz. Wrap a secondary around the primary, and you will see a waveform that doubles in size at a rate that is equal to the variation of either of the sig gen's from their tuned freq. The increase in waveform is the b/f magnet expanding into the secondary as the excitation field "collapses" at the rate of the beat freq. You can double or half the 174.9 and see the same thing

but at lower amplitude. Since the 174.9 and 8 are constants for these magnets, the more we can sensitize them, the easier to flip the domains.

We need to blast one pair with 8KHz at high power to loosen its tie a little, I think. ~ Joel

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12/11/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Piezo + Magnet + Unity+

Hi Norm: Found a way to nearly triple the I/O ratio of the barium ferrite transformer. Use a piezo in series with the primary and tune the sig gen to three times the resonant freq of the magnet... I'm only using a single magnet from the pair, and the res freq is 10800 HZ. However, using the piezo as a coupling cap, and tuning the sig gen to 32400 HZ, the input power is 3.4mw, and the output power is 9.7 mw. The measurements are taken across Dale precision resistors. This isn't going to drive much of a load, but by applying more power than half a volt from a sig gen will, if the same power ratios apply at greater input levels. The piezo's lattice being connected to the magnet's lattice causes harmonic sympathetic vibrations and this is a way to avoid "tuning" the magnets, as "Sparky" did. Because the piezo is resonating, it is "coupling" the input + free electrons, sort of like a quartz lighter. Applying this to the magnet at the third octave of the magnet's resonance will keep the magnet in a state of agitation, which releases MORE free electrons. This plus the high impedance of the input, especially when you consider that it is a series resonant circuit (typically LOW impedance) allows the output power to exceed the input power. ~ Joel

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12/11/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: AC Battery

Hi Norm: This circuit is basically an AC battery, which is connected to an ordinary bridge rectifier to give DC out. It is a piezo in series with a coil connected to a sig gen. The sig gen is putting out a measured half volt, but there is a volt apiece across the piezo and the coil as a result of the coil being wrapped around a barium ferrite magnet. According to Ohm, this is not possible, and it is ONLY possible because the piezo is being resonated at the third octave of the resonant freq of the barium ferrite. Let's crank this up and give Mr. Puthoff a call. ~ Joel

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12/11/94
From: JOEL MCCLAIN ~ To: ALL
Subject: The Rule of Nines

There is a "rule of nines", somewhere under the "Law of Squares", and it basically says that VIRTUAL or ETHERIC rotation occurs at PHI rates in resonant (all) matter. In an earlier message, I said that the nested tet is a cube/lissajous/caduceus, depending on where you are when you look at it. Also, in PHI, you have a VIRTUAL rotation of the cube after each octave, and there are three octaves (Front, Right, Left), and each octave contains resonance for each of the notes(Front, Right, Left) for a total of nine notes. As Keely said, and as we can see by looking at the tet, the forces are at RIGHT ANGLES relative to each other.

Using the tetrahedral lattice structure of silicon in a tetrahedral device such as the Nieper ring, the effect created is a reduction of the quadrupole forces of gravity.

Using the rule of nines in a device that combines lattice structures in series, and applying three octaves (nine harmonics) to the mass, you receive more power out than is applied to the device. This is because the lattices are virtually rotating 360 degrees for every cycle of input, and each cycle consists of eight tetrahedrons, which are apparent when you "square the circle, which is done with PHI. It's a nested relationship.

I now understand why the PHI relationship was once considered as part of a "sacred" geometry, and why the Fibonacci series, which is PHI, is a part of "magic squares". It is how things really work. ~ Joel

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12/11/94
From: JOEL MCCLAIN ~ To: ALL
Subject: Magnetic Resonance Amplifier

Today, to test the validity of the Magnetic Resonance Amplifier, or AC Battery, either name "works", Norman Wootan and I applied a signal
amplitude to the circuit which would "trip" the components into a higher level of output. The actual measurements, including power gains, will be included in a file to be uploaded with a schematic.

However, the circuit design is so simple that many people can build it from a written description. It only has two parts. The power gain is between 300-400%, and increases as the load is increased. The theory of operation can wait until the file is written. For now, if you want to build it, just connect a piezo in series with a primary coil that is wrapped around a barium ferrite magnet. Connect the secondary to a bridge rectifier, and the bridge to a DC load. Apply a signal level AC to the piezo, and adjust the frequency for the peak DC voltage.

You will find that the AC voltage across either the piezo or the primary is greater than the voltage from the signal generator. Primary current is virtually nil due to the piezo, and DC output power is several times the input power. Today, we measured 0.685W in, with 2.75W out. We used this to run a DC motor which consumed 2.5W, and to light a DC lamp very brightly. This is hard output DC. As we increased the potential from the sig gen, current dropped even lower, and output power increased, which improved the power gain ratio.

Norm and I plan to exhibit this at the next KeelyNet meeting. If you have any questions before the file is created, please address them to either me or to Norm. We worked together on this, and it took the symmetry of both of us to get it into operation. We think that it can make a difference. ~ Joel

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12/11/94
From: NORMAN WOOTAN ~ To: JERRY DECKER
Subject: AC Battery

Jerry: Joel and I began the documentation via Bert's video recorder which I borrowed last week to capture some UFO's we have had contact with. We now have a tape of the unit in operation with an excellent narrative done by Joel of the construction and the operational details. The more people who know of the details of the "breakthrough" the better off we all will be. The damn thing works and will only get better over-unity figures as we match impedances and capacitances of the tuned circuit. We have figured out several improvements already that will greatly multiply the already 4 to 1 output to input ratio. Hal Puthoff put forth the challenge and the Vangard team came through. This was a team effort and several folks definitely contributed. ~ Norm

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12/12/94
From: NORMAN WOOTAN ~ To: JERRY DECKER
Subject: Magnetic Resonance Amplifier

Jerry: To improve the performance of the test rig Joel and I wound a new coil with about 600 turns in the primary and secondary which made the overall coil about the size of one of those "nerf" footballs. When we hooked it into the circuit we found that when the freq was readjusted to the different impedance of the new coil that we got a multiple of 25.7:1 voltage across the series pizzo and coil versus the input voltage. We were inputing 35 volts at about 22 KHZ and got 600 volts across the barium ferrite coil and 300 volts across the barium titanate transducer which was singing in free resonance. Since the coil and the pizzo are in series there is a total of 900 volts that we need to match up so we can tap this high potential. Neat I/O ratio, to say the least. There is a lot of work to be done yet but we do have an excellent start. The more people that build this circuit the better. ~
Norm

12/12/94
From: JERRY DECKER ~ To: ALL
Subject: MRA

Hi Folks! Not to jump the gun, but Joel and Norman have come up with something that just might be a working over-unity device. I suggest you download the file MRA.ZIP which contains

both the .ASC and .GIF files describing how YOU CAN BUILD IT and test it yourself. If you choose to do so, please report back with any success, failures or enhancements so that others might learn from it. This might be 'the one'!! SEIZE THE DAY!... ~ Jerry

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12/13/94
From: NORMAN WOOTAN ~ To: BILL BEATY
Subject: MRA.ZIP

Bill: Please put the MRA.ZIP on the Internet for Joel and I wish this to be distributed as widely as possible in the shortest time frame so we can start to get feed back from other builders of this "wild circuit". I have worked with Joel on the construction and testing and am here to tell you that it does work exactly as we discribe. I have one on my bench that is easily running a 13:1 I/O ratio and we haven't even started to sort out the improvements in the design that will come as others explore the possibilities. As Joel stated, the circuit fundamentally uses compound resonances in the quartz and in the barrium ferrite material. We are vibrating the crystaline lattice structure of both materials to yield electron output. Through the series electron contribution of both the barium ferrite and the quartz over-unity gain is possible with a very small "tickling" ultra-sonic input which will be generated with a simple fixed oscillator and transistor driver. Thanks for your support. ~ Norm

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12/13/94
From: NORMAN WOOTAN ~ To: JEFF PANICI
Subject: MRA (Magnetic Resonance Amplifier)

Jeff: As you see in the above message to Bill Beaty, we still have a long ways to go but wanted this circuit out to all so that we can get
"constructive" feed-back from fellow builders like yourself. Keep in mind that this is a compound resonant device and therefore is deceptive in it's simple appearance. You may change winding ratios many times before you get it right so that the "Rule of Nines" that Joel talks about is complied with. If you will go back to the KeelyNet files on Keely's experiments and the DANART1 file then you will get the "hang" of tripple resonances and how they cause the crystalline lattice of the magnet to trip into free oscillation. When you get your circuit running properly you will be able to hear the magnet "singing" all over your house. Depending on the mass you will get a sustained note anywhere from 8 KHZ up to 12 KHZ. This is a very interesting circuit because off the shelf permanent magnets can be used with "no conditioning" needed. Basically you are "ringing" the fundamental structure of the magnet at the molecular level and possible at the atomic level causing it to be an "etheric pump" yielding electron that are somehow being replinished from the Space Background as Harold Puthoff has described in his excellent work on ZPE tapping. Moray King will love this one. ~ Norm

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12/14/94
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA (Tech Bulletin)

Since Joel and I have created a lot of interest in the MRA device we will place everything on line so that no "stone is left unturned". Long ago I saw a sci-fi movie of a suitcase size device that you could plug any size AC load into it and it would power it with no problem. I dreamed of building such a device by imploying a block of natural quartz with a mechanical oscillator attached to all faces (Tesla oscillator) to force the quartz to yield free electrons. I envisioned the output (high voltage) to be stored in a capacitor bank (1 kilo joule) them the output going into an inverter circuit and stepdown transformer to take this piezo generated voltage down to a useful AC voltage. Now Joel and I have combined this effect to the resonating of the lattice structure of a magnet to sum the outputs of the piezo effect and the ferro-resonant effect to give an over-unity total at the bridge rectifier. Last night Bert Pool came over to gather up the needed supplies to build a prototype circuit to do independent evaluation. After I had run the circuit through the paces noting the outputs and thoroughly discussing what we thought was going on here I turned off the meters, scopes and the signal generator and finally went to bed. Well I woke up a 2:00AM with a headache, went to get the tylenol and went into the room with the test rig on the bench. I turned on the frequency counter and found that the circuit was running in free oscillation with no input. Although no power was being produced the free running oscillations were filling my living space with a high freq ultrasonic squeal that as Joel has warned will give you a migraine
headache in short order. The free oscillation was around 44 KHZ with the freq counter ranging up and down (no lock on). I had to take the circuit apart to stop the ultrasonic ringing. As Joel has pointed out these titanium zirconate transducers, once set into resonance will continue to ring for a long period. Since there is possible some conditioning taking place within the crystaline structure of the material I believe that over a long conditioning period (burn in time) the whole circuit can be make sensitive to a combination of two frequencies that are necessary. The first freq involved is the input to drive the transducer which has to be 3 octaves down from the fundamental natural frequency of the ferro-magnetic resonant frequency. Although it has not been mentioned before in "A" public on this net, Joel and I were successful in isolating and identifying the fundamental Ferromagnetic Resonant Frequency as being around 174.9 KHZ. Doesn't it sound ironic that this freq should fall so close to what the Corums have determined that Tesla designed his big coil out in Colorado springs around? I have read several articles that speculated that the ferromagnetic freq or the earth natural magnetic field resonated around 180KHZ. With this 174.9 freq in mind we have applied the Joel McClain "Rule of Nines" to the circuit where we run the transducer at a freq that is a multiple of the fundamental 174.9 ferroresonant freq. His circuit is running at a fifth and mine is running at a third. Example: I input a sine wave signal at 2.28 V AC into the series resonant circuit at 59070 HZ and get a voltage developed across the transducer of 26.04V and a voltage across the coil of 24.02 with an output voltage from the bridge rectifier of 30.2 V DC. If every thing is running in an ideal phase relationship (transducer oscillations and ferro-coil oscillations) then the beat freq will partially sum the two voltages since they are in a series circuit and set up a circulating current in the primary which when the primary winding and the secondary windings have the proper impedance matching will extract the maximum amout of energy from the circulating current in the transformer into a healthy output at the bridge which is far OVER-UNITY, high I/O ratio.

My circuit is showing a 13:1 ratio at this time and I have not even approached a good impedance match in the windings. A real sharp RF engineer could sort all the details out in short order. I don't profess to be an RF engineer but have a good background in electronics.

This is the reason for Joel and I going "PUBLIC DOMAIN" with the circuit so that some highly skilled folks out there can take this circuit and help develope it into something of practical use. We don't want PROFIT-motivated people to "rip" off the idea for self gain. We want any potential benefits of the circuit to remain free for the taking. More notes as we learn more. As Joel says, "we are like teenagers learning to drive dad's Olds". A little help from interested fellow researchers is welcome. ~ Norm

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12/14/94
From: NORMAN WOOTAN ~ To: JOEL MCCLAIN
Subject: More power MRA

Joel: Remember the "golden rule" when dealing with "Hyper dimensional" physics-reverse think everything and you will be corect most of the time. We need some new physics laws and rules to play by in this "new arena". I will be out your way after the traffic dies down from rush hour. You need a back-up supply of transducers plus I picked up some neat ferrite wound impedance matching transformers so we can play a little matching game with the coil and transducer and also to isolate the input oscillator from the series tank circuit. ~ Norm

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12/15/94
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA (Tech Bulletin)

I know that now that our circuit is distributed "World-wide" thanks to Bill Beaty, we will be getting a million questions from every corner. The well-armed researcher will have done his or her homework and will have dug into the Keely-Net files and learned as much as possible from the numerous files on ENERGY and GRAVITY before asking questions. There are several very important publications and articles that you all should read to fully understand the fundamentals and principles of operation of the MRA device. First get TAPPING THE ZERO POINT by our dear friend MORAY KING. Second get and understand the series of books by one of the LEADING EDGE researchers on free energy TOM BEARDEN.
Third you need to go to the library and look up the series of excellent articles in PHYSICAL REVIEW by HAROLD PUTHOFF, BERNARD HAISCH and ALFONSO RUEDA. Fourth is a book by MARY and DEAN HARDY called PYRAMID ENERGY which lays out the "sacred geometry" which is rebuffed by modern physics and chemistry but through the underground research community is coming back strong and will re-write the physics and chemistry books of the future. Nikola Tesla said that the publication of the "Theory of Relativity" by Einstien was the greatest travesty that could have been commited against mankind and would set the world back 100 years. It did just that for all serious interest in the "energetic Aether" was disbanded by

the scientific world. Only recently has people like our friend TOM BEARDEN gone back and resurected the work of MAXWELL who had it all figured out along with JOHN KEELY and NIKOLA TESLA. We are opening a new chapter in physics and chemistry so be prepared to to new methods of measurement, new laws and terms to define what I like to think of as "HYPERDIMENSIONAL PHYSICS". All of the answers are out there for this ground has been tread on before only to be buried and surpressed in many cases. It won't happen this time around for we desperately need tomorrows energy today. ~ Norm

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12/17/94
From: JOEL MCCLAIN ~ To: ALL
Subject: MRA in Conventional Theory

The MRA is a series resonant LC circuit in which power gain is attainable as a result of the increase in effective impedance under certain operating conditions. When the series impedance increases,primary current is reduced. When the power available from the secondary coil either remains the same or increases as the primary circuit impedance increases, a power gain occurs.

This is not possible with a series resonant circuit made of conventional materials. Even unity power transfer is considered to be unattainable as a result of accumulated losses in the components, which are passive (reactive) devices. Materials and construction methods are chosen for these components based upon the type of application and frequency to be applied, with the goal of minimizing losses.

A typical capacitor with polyethylene dielectric has a dielectric constant of 2.3 times air. Air has a constant of 1.0, and is the basis for comparison. Titanium dioxide, however, has a dielectric constant maximum of 170, and a corresponding power factor of only 0.0006, comparable with polyethylene, so that the dissipation of primary current in the dielectric is extremely low. This is where the comparison ends, because the titanium composite "capacitor" is also a piezoelectric device as well as an excellent capacitor.

Heat adversely affects the power factor of most dielectric materials. Titanium zirconate, however, contains polar molecules which rotate as thermal pressure is applied. This rotation increases the dielectric constant if the frequency applied is equal to or lower than the resonant frequency of the dielectric. At series resonance, the rotation of polar molecules contributes to heat; as the dielectric constant increases, a corresponding release of free electrons occurs, as a direct result of the piezoelectric properties of the device.

In application, the MRA is tuned at resonance for maximum power transfer, then detuned slightly for maximum power gain. This relates directly to the use of thermal pressure at resonance, and the effect that this has on continued polar rotation and the release of donor electrons.

The coil, or primary of the MRA is a magnetic core which relative to the fixed capacitance of the piezo, is a tuned permeability device. This is often used in RF devices to attain a stable resonant

frequency. Magnetic materials are chosen based upon the operating characteristics of the intended application to reduce eddy currents in the operating range. In these applications, the resonant frequency of the magnet itself is avoided, as this would "beat" with the oscillating current. However, in the MRA, this is the exact effect we want.

The barium ferrite magnet resonates audibly at frequencies which are harmonics of the series resonant frequency. The effect of this in a typical audio application is called harmonic distortion, and is not desirable, but once again, in the MRA, this is what we want to occur. There is energy in the harmonics, and this energy serves to both counter eddy losses as well as to oppose primary current flow, while contributing to circulating current within the resonant circuit.

The net effect of this, is that when the MRA is detuned, harmonics of the audible frequency "beat" with primary current, opposing its flow, while the increase in circulating current couples more power to the secondary, and therefore to the load. This is how the power gain is attained, basically by considering the naturally occuring harmonics as beneficial instead of as undesirable effects to be filtered out.

When the MRA is detuned, the effective impedance increases as seen by the source, while the power available to the load decreases in less
proportion. This is measurable by using resistive equivalent circuit testing. However, the detuning is load dependent, and slight adjustments are required if the load requirement is greater than the power band of a harmonic interaction. After retuning, the power will increase in quantum intervals as the circulating current is reinforced by the reaction of the permeable magnet core. This will be seen as slight incremental voltage increases across the load device.

Once the magnet is "ringing", it's frequency and therefore harmonics remain stable, as long as the series resonant range is not exceeded. Therefore, the detuning affects the piezo only, and the circulating current increase is a result of the phase relationship between the harmonic and the source. Voltage amplification is seen across the primary, measurable higher than the source voltage, and this is "seen" by the secondary. This is not the same thing as a power gain, because the power gain is a direct result of effective impedance.

It should also be noted that the term "virtual rotation" has been applied in describing the operation of the MRA. The comparison is made with a generator, in which relative motion occurs between a coil and magnet. Rather than use physical energy to rotate a mass, the MRA uses resonance to rotate the energy. This is seen in the polar rotation of the piezo dielectric as well as in the molecular energy occuring in the reactive component of the magnet, ie, the ringing. The lattice structures of the piezo and magnet are compatible for virtual rotation, and the materials complement each other
electrically.

In the past, researchers have noted many effects which occur at aggregate resonance, which typically includes a range of three octaves. Anomalous energy gains were referred to as "aetheric". The aether was believed to exist outside of the three physical dimensions, and could be "tapped" for free energy at resonance. Aetheric energy is said to be limitless, but to vary locally with increases in earth magnetic fields at sunset and sunrise, like the tides of an infinite

ocean. This effect is not thoroughly understood, but has been observed in the MRA, as increases in output in the early morning,
and decreases in the early evening. This is still being studied.

Experimentation will determine the optimum MRA design for a specific range of applications.

12/17/94
From: NORMAN WOOTAN ~ To: BILL BEATY
Subject: MRA

Bill: Yes those transducers will work but they are physically smaller than the ones we are useing. I figure when this circuit is verified that the next step will be to go to a natural quartz milled wafer of the natural freq we desire to same as the crystals used in transmitters except a lot larger. If you have access to a Thomas Directory at work, please look up Branson who makes the ultrasonic welders so we can get a source manufacturer from them. Maybe someone on the Internet will know the manufacturers of these transducers. This circuit is a mindbender when you study it's characteristics. For example I started off this morning (after I let the circuit run all night to condition the magnet and piezo crystal) with a total over-unity power gain of 1.65:1 ratio. After playing with the circuit all day taking measurements after each adjustment or change of operating parameters, arrived at a 150:1 I/O ratio. Here are the figures: Input 15.34 VAC @ 54.9 KHZ with .57 Ma which is .000874 Watts which has to be adjusted for power factor by multiplying by .707. The output is: 16.75 VDC @ 78.8 Ma into a pure resistive load. This figures out to be greater than a 150:1 I/O ratio. I guess you have figured out how excited everyone is over this "Gadget". Now unless OHMS law has been nulified or there is some "spook" phenomenon that Joel and I cannot find then we have the 1 watt challenge in the bag by a wide margin. More as we learn more. ~ Norm

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12/18/94
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA (Tech Bulletin)

I know that there are quit a few folks out there running around digging up parts to build a MRA device to do independent testing. Let me share
with you some findings that will assist all in this approach. First disregard the measurements that I gave Bill Beaty yesterday in a message about power gain. I like Joel find myself back at "square one". It happens like this, when you have this circuit up on the "ragged edge" where the first harmonic seems to be phase "beating" or attenuating the input current and providing potential only to drive the first stage resonance in the transducer, you disconnect the load to do the only accurate total power consumption test which is "equivalent resistance" measurements so we can nail down the elusive power figure according to OHMS LAW. Well, when you unload the circuit under the optimum operating conditions the transducers will immediately trip into a very powerful mechanical oscillations around 2KHZ and self distruct in short order and at the

same time put out a violent voltage that can soar above 1000 VAC which inturn will literally wipe out your driving amplifier and your frequency counter. Fortunately the scope is better protected on the front end. So what I am saying is that you begin all over conditioning a new set of driver transducers which even fresh out of the box will display over-unity output in the circuit. The people over at the manufacturing firm that makes these transducers are "smiling" and calling their stock broker to exercise some stock options in their product for I see a lot of you destroying a bunch of transducers in the process of testing and improving the circuit. Let me share with you some ideas. When I go back and read TOM BEARDENS works about potentializing a circuit without the attendant circuit that is normally involved we will have achieved the over-unity that we are seeking. After careful study of the MRA I can see how this device can be separated into two separate devices. First the piezo is a source of high freq. potential which at 3 octaves above drive the ferro-resonant primary coil at the natural resonant freq of the magnetic material. Now I believe I have figured out the secret behind the Swiss M-L
Converter known as the TESTAVISTATIKA or TESTATIKA for short. This device was developed in the group called METHERNITHA by Paul Baumann and it has been seen by our friend Stephan Marinov. This ZPE tapping can be accomplished through potential being derived from any source such as the electrostatic charge developed in the whinshurst type generator. The secret is in the MAGNETIC RESONANCE AMPLIFIER. Ken Shoulders and R.A. Ford demonstrated that what we term as harmless energy (electrostatic charge) when stored in a large capacitor is real charge separation and can do some interesting things such as exploding water, wire and other interesting research projects. If we take advantage of
the mechanical oscillations of the transducer and operate it at a level of mechanical resonance (in free oscillation) that will optimize the voltage output (lets say 400 volts) which inturn we use to drive the ferro-resonant barium ferrite core coil then we can extract some serious power from the coil providing that we have done our homework and provided the optimum impedance matching and tuning of the circuit to maximize the final product. We are a long ways from our final goal of having a unit that we can flip a switch and the thing will run "stand alone". Joel and I have taken the first step by sharing with you our findings so let's work this thing out together as a "joint project". We will share all findings in these Tech Bulletins so everyone is on the same sheet of music. Now for some "spook" type anomalies that occur around this circuit when it is running in the ZPE tapping mode which is where we purposely de-tune the circuit upward in freq so that we get the "beating" effect from the first harmonic. When you see this on the scope it will appear as the sine wave patern of the input being broken into little line segments by an invisible or transparent oscillation at a much higher freq than the primary driving signal which in the case of my circuit is around 56.8 KHZ. Even when I have CH 2 turned on with no signal (base line only) it also is broken into short line segments as if the electron beam is driven into cut off by this invisible signal. Any RF engineers out there seen this? Please explain same. I believe that all the phenomenon that is being observed by people such as Sweet, Aspden, Adams, Lambertson, Searl and Tom Bearden are all connected by a common thread. Let's "unravel it" ~ Norm

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12/20/94
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: MRA and the Nieper Effect

Hi Norm: As we suspected, there is a "Nieper effect" with the piezos when they are at mass aggregate resonance in the MRA circuit. I've measured it many times this morning, and it is very consistent. Here's the test:

First, warm up the MRA for about an hour. I'm using the sig gen as shown in the schematic that I left in a message for you yesterday,
with all of the same voltages and currents. Then take the piezo out of the circuit and set it aside for a few minutes.

Put the piezo on the scale and zero the scale with the "dot" side of the piezo up. Attach leads to the piezo so it is back in the circuit and let it run for a few minutes. Remove the leads and the piezo now weighs 200mg less, but it regains the weight within three minutes.

Do all of the above, but with the "dot" side down, and the piezo will gain 200 mg, and lose it in three minutes.

Because this test is at low power, I suspect that the effect may vary in degree with the application of greater or less power.

Joel

12/21/94
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA

Well tonight Joel and I did some testing which we hoped would clearly define just what we were dealing with in the MRA circuit. Joel, in an
earlier message described it as "having a tiger by the tail", you ain't seen nuthing like this tiger. The only way I would attempt to describe this circuit is a "mini black hole" on your work bench. Electrical engineers and PHD's in electronic theory will go "ballistic" on this one I promise. After running the MRA at low power levels for several hours we turned off every thing on the work bench "everything". After attaching one lead of a Fluke 87 true RMS meter to the input of the MRA and holding the other lead in my hand we were getting a reading of 27 VAC at 60 HZ and the readings got stronger the further away from the energy field which had developed around the device. This circuit when set into resonance even without any "excitation" of any kind will pull in "ambient" energy in this case the 60HZ flux field present in the room. Would this be clasified as a "virtual energy collector".

Maybe Tesla was right about the possibility of a "cosmic ray or energy collector". Another interesting thing that we verified tonight was that the natural ferro-magnetic frequency is approximately 174.9 KHZ. While the MRA is operating with an input freq on Joels device (each magnet has it's own operating or resonant freq) of 32.4 KHZ the wave form can be seen as a segmented line which under careful study shows by the broken line segment count to be caused by a "phantom" oscillation from the ferro-magnetic material that blanks the electron gun at a freq

of 174.9 KHZ. We are using a good Techtronic 80 MHZ scope so this we find real interesting for this opens the door to tapping energy directly from the "earths magnetic field". Everyone says that weight loss is associated with any device that displays any over-unity tendacies. Well, that too has been verified. Joel will address this phenomenon in a later message but I am here to tell you it is more exciting as time goes on here. If I were to tell an electronics engineer that we have seen "negative numbers" on current draw when this circuit is running would this mean gain would be "infintiy"? Joel is going to have to explain this one for we decided to use a 12 VDC powered amplifier so we would have a pure DC input so we could pin down the input current draw. Well if you take the idleing current draw (amp unloaded) then tune the MRA for maximum gain and the current draw goes to a negative number then what? This will take some explaining. More as we learn more. ~ Norm
PS: This circuit is absolutely over-unity.

12/21/94
From: JOEL MCCLAIN ~ To: ALL
Subject: MRA Anomalies

Eight days ago, the MRA was invented. Almost immediately, it began to exhibit over-unity characteristics. However, there have also been a lot of "quirky" effects... each taken separately might have been test equipment error or technician error. However, these effects are forming familiar patterns now...familiar but not always predictable. The toll in dead and damaged test equipment so far is one panel mount DVM, one frequency counter, two audio amplifiers, and numerous 60 watt light bulbs.

Sometimes, when supplying the MRA from a 12 VDC powered audio amp, the battery current will decrease compared to the battery current to the amp with no load at all, and at the same time, amp output voltage will increase... Taken together, this indicates that the MRA is feeding energy back into the amp. Later, with no changes to the circuit, the MRA will behave like a normal load, and cause a small increase in battery current with a small decrease in amp output voltage.

The voltage and current waveforms look like dotted lines, where each dot and space segment is equal to 175 KHz, which Norm and I believe is the free running resonant frequency of ferrmagnetism. We have never seen this before, and for that matter, neither has anyone else that we've talked to about it. Even with nothing on Channel B of the 'scope, the display will exhibit the dotted line effect whenever the MRA is running and connected to Channel A.

Anything and everything in the field of the MRA is affected. Should the MRA's output load become accidently disconnected while the MRA is at resonance, an instantaneous and very powerful destructive surge will occur.

I THINK that the MRA, by resonating a magnet at mass aggregate frequency, is magnetically "linking" with everything in its field, and behaving like an "energy pump". We see this when we walk up to it and the output from the MRA goes up, even though the MRA is hooked up to a

resistive load which is causing it to provide current. This also changes based upon the time of day relative to sunrise and set.

To test anything, you first must isolate it... by virtue of the design of the MRA, it cannot be isolated. It intrinsically links itself to everything with a coil or magnetic field, even to a quartz wristwatch if it is in the same room. As such, we get varying power gains, and the variations seem more to be a question of which test equipment is on the table at the time of the test.

Please bear in mind that this is a brand new circuit... As far as that goes, it's a whole new technology. Once the magnet has been resonated, and then disconnected from the rest of the circuit, it will continue to provide up to 25 VAC at 60 Hz using a human "antenna" to capture ambient energy in the room. Last night, Norm and I were measuring over-unity gains of 2X-3X, but we don't really know for sure if we were "pumping" the energy electromagnetically out of the test equipment, house wiring, earth's magnetic field, the ether, or some combination of the above.

We need some independent testing by individuals with awareness of the anomalies mentioned in this message. There is obviously a lot of power "in flux" which collapses into the MRA if the load is removed, so there will probably be more equipment lost. There is also a whole area of gravitic anomalies to investigate, because the piezo will weigh measurably less when it is in the MRA circuit, and regain the weight when it is disconnected.

The original MRA is being sent out for engineering review, from which we hope to learn more, but the more voices that are heard from, the better our chances of finding out what is really happening. ~ Joel

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12/29/94
From: NORMAN WOOTAN ~ To: JOEL MCCLAIN
Subject: MRA (Power Test)

Joel: I have been putting a lot of thought into the high power test of the MRA device. Since you have determined that the circuit is creating what we call Mhos and usually this phenomenon is associated with vaccuum tubes in operation and going back to the work of T. Henry Moray with his "valve" then I am setting up this 250 watt tube power amp for the ultimate test. Since transistors seem to not be able to take the bucking effect of the "first harmonic" checking the input current into the circuit we should use the vaccuum tube for this final stage of signal injection into the MRA series resonant primary. The "finals" tubes then are basically in the series circuit and will survive the punishment brought on by the "hammering" effect of the first harmonic. These large output tubes will display more of your "Mhos" effect than simple transistors. I still believe (I keep dreaming about it) that the vacuum tube should play a part in the circuit as a "coheror" of the ZPE into the circuit. Certainly worth trying for we are at the point where we need to push the piezo's at their design power ratings of 50 watts at 150 Volts. There will be some serious voltages developed in the series resonant primary for we have already seen nearly 1000 Volts circulating with only 20 volts of primary input. A vacuum tube is the only animal that could survive the punishment in a high voltage circuit like this. Bob Paddock's

indestructible transistors won't cut it in this harsh environment.
Thoughts and ideas. ~ Norm

12/31/94
From: NORMAN WOOTAN ~ To: BILL BEATY
Subject: MRA

Bill: Your complete MRA is on the way and should be there by Monday. I downloaded the Internet traffic and saw so much "negative energy" being
expended out there trying to discredit something that we offered up in the "Public Domain" for other researchers to take a serious look at. The first counter statement that I will make is that Joel and I agreed that we will not sell or accept any re-imbursement of any kind for anything connected with the MRA device for the very reason sited in the message traffic. No, I will not sell off my small stock of transducers. I will give magnets and transducers only to serious researchers for the purpose of circuit Over-unity output verification. We are not seeking any profit from this device thus the reason for ofering it as "public domain". If those out there are so narrow minded that they will not analyze the circuit for what it does, so be it. They are beyond help. To those who question why we have not "self powered" the device, we are working on the voltage regulator, oscillator and power driver circuit that will make this possible. Everyone thinks this can be done overnight- "wrong"- things don't happen that fast. Our intent was to get the fundamentals out for all to see and experiment with. The most important document in the MRA project is the RULE9.ASC file which explains the fundamental theory behind the MRA principle. I will be putting out a paper shortly explaining what is going on in the Griggs and Perkins Hydrosonic Pump for it is directly tied in to the MRA in principle of operation and ZPE tapping effects. More on that later.

As to the critics out there saying that measurements of input power are defective. This is what we currently have at our disposal on our work
benches between Joel and myself: 2 ea. General Radio Precision Decade Resistor Boxes, 3 ea. Techtronic 465 Dual Trace Scopes, 2 ea. Fluke 87
true RMS meters, 1 ea. P6042 Current Probe, 2 ea P6021 Current Probes, 1 Wavetek 164 Sig Gen, 1 ea BK Precision E310B Sig Gen, 1 ea. HP 200 CD Sig Gen, 1 HP 5383 Freq Counter, 2 ea Simpson Freq Counters, 1ea. Wavetek DM 27X7 meter & freq counter, and a whole bunch of the old analog Simpson and Tripplet meters that have been cast aside with the coming of the digital world. I realize that we do not have the sophisticated equipment that you would find in an industrial or university lab but it gives us a good idea as to what is fact or fiction. We have the circuit out being tested by those that do have the latest state-of-the-art equipment so time will tell all. Be patient is all I have to say for now. In time the truth will be known to all. Norm

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01/03/95
From: JOEL MCCLAIN ~ To: BOB PADDOCK
Subject: Mo' on Mhos

Hi Bob: When the MRA was designed, the intent was to create and above unity device based upon earth itself...its magnetic fields and frequencies. We've since seen that it is directionally sensitive to earth magnetic fields, and that it "responds" to sunrise and sunset. For all practical purposes, the MRA at resonance is like a funnel with a vacuum device attached to the narrow end, collecting energy which becomes more condensed as it travels into the funnel, where it is trapped in the windings of the transformer by the collapsing magnetic fields.

This then represents an excess potential, which we see when the signal input voltage is higher under load of the MRA than it is under noload
conditions. We also see this when we can reduce the entire AC power to the signal source below no-load, while at the same time producing
usable power from the MRA.

According to scalar theory, the excess potential is a quantum voltage potential which reacts according to known non-linear optical (NLO)
laws of physics. Because the Coulomb gauge transverse potential (CTP) exists in all of space time (also standard physics), small amounts of
excess potential occur naturally in all semiconductors. This interferes with applied EM potential, and causes "noise", which is normally filtered out. Thus, semiconductors are natural scalar interferometers which translate low level amounts of excess potential.

When two or more semiconductors are connected, directly or indirectly in a conductive path, a hyperspatial link is formed and the translated
excess potential will bounce back and forth between them within this link, which can produce laser beams. Or, the energy may reach the level sufficient to destroy one or more devices, or to destroy the semiconductors in the test equipment attached to the circuit. This is fully documented in the Lawandy experiment at Brown University and described in the March 31, 1994 issue of Nature Magazine. A "ping pong" effect occurs with semiconductors which have "self-targeted" each other, creating spurious bursts of normal EM energy. Credit for all of the above information to Tom Bearden, who kindly provided it after years of study and research.

Now we have two "theories" to describe one effect (likely there will be many more) so we have to find one that works, in terms of being consistent and reproducible. It is, I believe, both. The "earth" theory is the "outer" or normal EM description, since we are dealing with EM to drive a motor load. The Bearden theory is the "inner" description, and provides mathematical exactness to the process. We used the "outer" theory to find the lattice structures, resonant octave ranges and LC relationship of the MRA. That still leaves us with the unseen mechanism by which excess potential is realized in the circuit. That is where Bearden's "inner channel" theory fills the void in understanding with clarity and precision.

It is really neither Mhos nor negative resistance as I understand it, but the translation of low level CTP energies into usable EM. The aspect of the MRA which is unique is that it traps this potential and puts it to work driving a load instead of building up and creating a NLO laser effect. I believe that the energies, as soon as they are translated into EM, are "caught" by the magnet and pulled into the resonant circuit, where they are measured as excess potential. I hope

that this message ends up on the I-Net, as it will provide the references within conventional, accepted physics that can be studied in order to visualize the functioning of the MRA. ~ Joel

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01/06/95
From: JOEL MCCLAIN ~ To: JOHN PETERS
Subject: mmmmm.... could be!

Went back and read the WBSMEMO.ASC file again... memory ain't what it used to be, and never was. I hadn't thought of the MRA within the
context of that file, but you are right on the mark with your comparison. The biggest hurdle to understanding the MRA is in seeing it as an new device via existing technology. It is a different technology, actually a very, very old technology using new components. However, because the technology isn't in the "books" yet, it is viewed (at best) as a "new" technology.

The existing "rules" don't apply... but the old, really old rules do. For example, when Heaviside bastardized Maxwell's Theories (you will NOT find the Heaviside interpretation in ANY of Maxwell's published works), Heaviside stripped out all of the references to the ether, which he said was "mystical and should be murdered from the theory", and so he murdered the ether... except that it just wouldn't die!

Maxwell opened the door to P-channel quantum potentials, and Heaviside slammed it shut. Heaviside wanted to provide simple "laws" so that the electricians of that day could vector power and measure current in workable systems. Heaviside never went to college, did not know calculus, and was lost in the true implications of Maxwell's theory. It's time we moved up to the reality of ALL of Maxwell's theory, not just the kindergarten version.

Anyway, I got side tracked... back to your question. Without having seen the WBS device, it's hard to say for sure, but the effects seem similar. The INTENT of the MRA was to design a device compatible with naturally occuring energies, specifically ferroresonance as it applies to earth's electromagnetic fields. However, in DOING this, especially with optically sensitive materials, we enabled the MRA to re-open Maxwell's door. What we caused was a link to form which translated etheric energy into ordinary EM in a closed loop resonant circuit. This link is referred to as the "P-channel", because it manifests as excess potential.

This effect has been experienced in semiconductor circuits for many years, and is normally destructive to the devices, so resistive and filtering components are added to effectively "close" the channel. This isn't necessarily bad, because until circuits can be designed to USE the excess potentials, we don't want them going into resonance and burning out. As seen by the Neiper/Seike Ring (the schematic that is on KeelyNet is wrong, btw), you also experience gravitic effects when you allow tetrahedral lattices to self-resonate.

Considering that the MRA at resonance is virtually stopping the spin of particles (like a strobe synchronized to a timing mark), it is very likely that a more efficient MRA could cancel the quadrupole effect of gravity. There are other ways of doing this, such as the Biefield-Brown

method of high potential or the Searl method of folding energy onto itself in resonant plasma layers, and possibly the technology of anti-g (for a practical space ship) would utilize some or all of the above. However, we'll never get "there" from "here" by using the Heaviside "laws". ~ Joel

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01/11/95
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Lockheed

Howdy Norm,

Got a call from a gentleman at Lockheed in Ft. Worth. Lots of info from this guy...they are doing something similar to the MRA using the
same piezo material, but have only got 140% gain so far. He said that the Russians and Germans are doing the same thing with the same
material, and that our piezos are the "apex of electrets". They are going to buy some at Tanner's and try to match our gain.

He thoroughly understands the MRA, and offered his congratulations to us for developing and sharing it. He also mentioned that the
virtual rotation is the real definition. He asked about some guy in Mississippi who is using neo-d, and who is "rotating", but agreed
with me that the neo-d lacks the ferrite core to turn the excess potential into load current, so this guy will barely exceed unity.

Anyhow, it was sure nice to hear that others are doing the same thing and admitting to over unity.

Joel

01/14/95 10:49
From : JOEL MCCLAIN ~ To : BILL BEATY
Subject: PHI and the MRA

Hi Bill: The last message wasn't as clear as I would have liked with regard to PHI. I once worked out the harmonic and octave relationships as PHI (and PI, since PI = PHI squared, times 6/5...thus PHI squared = PI...also, 1 + 1/PHI = PHI, which is also known as the Fibonacci Series).

The file PHI&RES.ASC has some of this information, and because the "notes" harmonize perfectly and the octaves double exactly, this conforms to "standard" musical scales as are used today. Using the Fibonacci series as a starting place for note frequencies is not an arbitrary decision.

Today, we see PHI as a methematical constant, ie, 1.618, for use in plane geometry. To the ancient Egyptians, it was math but had a much deeper implication... It was the symbol of rebirth throughout eternity just as the Fibonacci series "perfects" at higher number intervals. Also, because the use of PHI in art is very "harmonious" to view, PHI coordinates (nested tets) were used by Michelangelo in the dome of the Sistine Chapel, as well as by Veronese, Raphael, da Vinci, and was even used by the architect Le Corbusier in the design of the United Nations building.

In retrospect, I think that this must be a perfect validation of the resonance based chart of the elements as created by Walter Russell, although he certainly doesn't need any validation from me. The fact is, music is math and geometry, and geometry is the yardstick for three dimensional existance. It's all one nested relationship, and the singular constant is PHI. If you want to create resonance and balanced harmonics in octave groups, you must use PHI. Because we tend to separate "music" from "science", we don't HEAR nature, and we trust our intellect to create unnatural yardsticks. Fact is, when computers were invented, and IBM needed programmers, they hired musicians to train for the positions.

In an electronic circuit, semiconductors are made of silicon or germanium, both of which are tet lattice structures, and both of which will occasionally break into free oscillation, rich in PHI-based harmonics...that is how the Nieper ring works, because once the material has three octaves of resonance, the particle spin is virtually stopped...like a timing mark under a strobe... And the effect of gravity is suspended.

Three octaves are necessary in 3-space because the each of the octaves "fills" one dimension. The octaves interact with each other to make
harmonics at 90 degrees of phase separation, effectively "filling" a 3-space object. This is mass aggregate resonance, and it allows you to couple biwave vectorless energy into a circuit. It also allows you to overcome temporal effects as well as gravitic effects. That is why I said that when you nest two tets, you have the keys to everything.

The MRA uses materials which are cube latticed, and a cube IS a nested tet sitting on its "flat side". So, when you trap the harmonics on one side of a phase reversed series resonant circuit, you develop a potential which is higher than the no-load voltage of the device which is supplying the circuit. That's half of ZPE. The other half is having ferrite in the resonating core to provide electrons to match with the excess potential to create power to a load. And that's the MRA.

Part of the resentment to this information is simply due to the fact that all of this was known to and possibly discovered by very ancient peoples... and we are lagging behind them today in our comprehension of science as nature, by the division of music and science, etc. Well, all I really wanted to do was to provide correlations to help tie in the octave relationships with the lattice geometry, and I hope that this information helps. You can see how well it is received by most people, but you can also measure the excess potential on your own MRA so you'll have to decide for yourself. Enjoy.

01/23/95
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Hal's Test Report

Hi Norm: I got a fax from Hal, and he states that the MRA is only 50% of unity. He put resistance in series with the primary, over 11 ohms, and measured the voltage drop across it to determine input current. In effect, he used the only method which would drive the MRA below unity. I had already told him about this before he did it, so I don't know why he did it. I called Tom to get his slant on it, and he suggested that I immediately write back to Hal and point this out, and to keep a dialog going with Hal. I sent Hal a fax, which is below this message to you. It's going to be up to us to provide the self-sustaining mode of operation, and refute Hal's test report. I think that Hal is being straight with us, and that he believes his test results. Let's be very cool about this... eventually, the truth will be known. We know, and for now, that will have to be enough. ~ Joel

FAX Page 1 of 1
To: Hal Puthoff ~ cc: Scott Little ~ From: Joel McClain
Subject: Review of MRA Test Measurements

First of all, thank you both for the time and effort which you gave to the test of this device. It is very gratifying to us that your measurements did not differ with those which we had reported.

I think, however, that we need to continue dialogue with regard to the method of determining input power to the MRA, specifically with regard to the measurement of primary current. In our testing, we had found that adding resistance in series with the primary had the effect of increasing primary source current. I had mentioned this to you in one of our telephone conversations, and was hoping that you might shed some light onto this apparent violation of classical theory.

We had found that primary current, as measured inline with a meter, is greater with a resistor in series with the primary than it is with only the meter inline. Using Thevenin's Theorem as a basis for using the equivalent resistive circuit, we believe that the primary current from the source is much lower than your tests indicate.

Adding resistance in series with the primary does, as you indicate, cause the MRA to behave as an ordinary series resonant circuit. You have verified that which we stipulated. We also noted that we don't know how to determine power when source potential exceeds noload. We attempted, but were unable to determine this.

The use of a series resistor is not debatable in a classical EM circuit. However, classical EM theory excludes the possibility of outputs above unity, and adding resistance has already been shown to eliminate the over unity effect of the MRA. We hope that you will consider further tests which do not add resistance to the primary.

Again Hal and Scott, our sincere thanks to you both. Best regards ~ Joel McClain

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01/24/95
From: JOEL MCCLAIN ~ To: ALL
Subject: MRA Evaluation by IAS

Late yesterday, I received a fax from Hal Puthoff and Scott Little at the Institute for Advanced Studies at Austin. Hal confirmed the measurements which we had documented for both load and no-load operation of the MRA. However, different conclusions were reached with regard to interpretation of the measurements which do not support over-unity gain.

While we are still in dialogue with Hal and Scott with regard to the interpretation of the measurements, I felt it best to share this information with all interested KeelyNetters, along with a sincere "thank you" to Hal and Scott for their kind and generous assistance in the test of the MRA.

As is often the case, especially with ZPE devices, correct data can lead to incorrect conclusions... this may be the case with the MRA as well, in terms of Norm's and my testing. Looking back, I'm very glad that we shared our data with everyone, as this may help others as a "case in point". Alternately, however, we have requested that Hal and Scott try testing the MRA without adding series resistors in the primary circuit. We think that the addition of resistors might have the effect of blocking subharmonics, which would cause an increase in primary source current. When components are added, it is no longer the same circuit, ie, it is no longer the MRA, in our opinion.

We will be continuing our work with the MRA, as the most difficult measurement for us to verify is that of primary current. We hope to perform the ZPE "litmus test" with an oscillator to test the ability of the MRA to self-sustain. As with all tests, we will share the test results.

My personal thanks to all of you as well, especially Jerry and Bill, for helping to share this and all previous information. ~ Joel

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01/25/95
From: NORMAN ~ To: JERRY DECKER (SYSOP)
Subject: MRA Testing

Jerry: Read carefully what transpired in the Hal Puthoff test of the MRA. I now see what you tried to tell us about Hal Puthoff. OK! Go ahead and say it "I told you so in the very beginning". We live and learn. The very thing that we pointed out to Hal that would drive the MRA below unity during testing is to apply a resistor in series with the primary, what did he do, placed a resistor in series and made the MRA into an ordinary series resonant transformer which is below unity and then based his report of findings on this very point which we had already told him was not a valid test for it modified the MRA so that it could not possibly be an over-unity device. He just doesn't get it. We are proceeding full speed and I have a special MRA running at 7.5 Watts

output. I am faced with the same problem that you have in that I still need that oscillator and front end driver to make it
"stand-alone". In time, In time. ~ Norm

01/25/95
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: More testing, Igor!!

Hi Norm: I had a most illuminating conversation with Hal today. I've asked him to keep the MRA for as long as he feels that it has anything to offer him as a device for testing. At this point, he may be about done with it, as it appears not to be above unity. The key to this is not in the reduction of current, which occurs as we have seen, but in the cosine of the phase angle, which changes as the circuit is detuned. Thus it is possible to have a vastly reduced current in combination with a measurable increase in terminal voltage and still have a relative increase in input power. Reactance, which alters the phase angle, becomes more prominent as the MRA is detuned. Now, I THINK that this is minimal as long as we are within the bandwidth of the Universal Resonance Chart, but I could be wrong.

If this is what is happening, and Hal's test provides data which indicates that this is the case, then the phase angle changes should be directly measurable. I'm not completely convinced, and won't be until we have quantified this. The other indications which we have seen, such as the reduction in output current from the driver xistor of the amp, and the net reduction in AC current to the amp, and the tests with the grain-of-wheat lamps, and other tests, lead me to believe that there is something more going on here.

I mentioned that we are going ahead with the plan to build an oscillator to test the MRA in self-sustaining mode, and that the oscillator must be inductively coupled to the MRA. I've asked Hal to test the MRA using inductive coupling via an isolation xfmr and to omit the series resistor. This would eliminate the local value of impedance, ie the resistor, which is replacing the distributed resistances in the tuned circuit. The inductive coupling will provide the same E&I lead-lag relationships which we have in our own tests.

I hope that everyone is aware that I have the utmost respect for and confidence in Hal and his staff. Sometimes typed messages are subject to wrong interpretation, and I really DO NOT want that to be the case here. I genuinely respect them and the efforts which they have given in the test of the MRA. I understand the conclusions which they have reached, and am gratified that they have verified the accuracy of our measurements. Hopefully, this will put to rest all of the doubts concerning the accuracy of our measurements, frequency range of test equipment, etc. We differ only in the interpretation of those measurements as related to input power. I would hope that any inventor of a device of this type would have the advantage of a review by Hal Puthoff. Regardless of the outcome of the review, it is an honor.

As I told Hal, to paraphrase Yogi Berra, "we agree differently"... and that is all. The burden of proof is, as it should be, on the inventors. So we'll prove it; it works or it doesn't... and we'll quantify it either way, and share the results. C'ya. ~ Joel

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01/26/95
From: NORMAN WOOTAN ~ To: NORMAN COMPARINI
Subject: MRATEST1 Response

Norm: In regard to your question as to our response to the MRATEST1 Report I will go on record with the following comments. First there is
a strange "paradox" here that thus far has eluded even the best instrumentation in attempts to explain this circuit. Let's say before going any futher that I as does Joel personally appreciate trhe efforts of Hal and Scott in their analysis of the MRA device and look forward to working with them in the future in futher testing when we can nail down what is really going on in the circuit. This project is not going to just die out. I personally have 3 ea. "Super MRA devices" on my bench which do some rather interesting things which defy all explanation by conventional "EM" theory. I will stand by my statement that there is a phenomenon here that has eluded all attempts to explain the circuit even with the most sophisticated "digital equipment". Case in point: MRA that I call "big coil 1"; Input is 80.2 VAC @ 798 Hz across a "grain of wheat" bulb (glows very dim) with an output of 52.7 VDC into a load of 2 ea. (parallel) 48V panel lamps drawing 3.42 Watts at a current of 61.5MA. Will some "electronics engineer" out there tell me how a tiny grain of wheat bulb with 80.2VAC applied across it in series with the MRA circuit pass enough current to drive the observed load of 3.42 Watts??? Any and all explantions will be accepted and considered. Wouldn't you agree that something real strange is going on here? To show you that this "DOG" is not going to lay down and die is evidenced by my latest MRA that I constructed last night which does the following: Input, 53.5VAC @ 33,600HZ with an output of 120.2VDC into a resistive load of a standard light bulb rated 120V 13.5 Watts burning very brightly. Input current? Well let's put it this way, I placed a small miniature Radio Shack lamp rated at 6V @ .025A in series with the MRA input and the tiny little lamp was burning very bright while sustaining the output load. Keep in mind that we are dissipating power in the form of heat and light in the series resistive load in the input side of the circuit therefore the question arrises as to what is the effective voltage and current across the piezo and primary coil of the MRA circuit. Does conventional "bridge" or series resistance calculations apply? If so then will you figure it out and get back to me as to your explanation. I told you it wouldn't be easy. ~ Norm

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01/26/95
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Cosines

Hi Norm: It's been a while since I vectored a circuit, but the thought kept bothering me that the maximum value for the cosine of theta is 1.0, which is based upon a zero degree phase difference

in voltage and current... or pure DC. The least value for the cosine of theta is zero, which represents 90 degrees of phase separation. The value most ommonly used is 0.707, which is the cosine (and the sine) of 45 degrees, or AC across a resistive circuit.

Now, a series resonant circuit is different, because it has a 180 degree phase difference between the inductor and the capacitor at resonance. However, that difference exists BETWEEN the inductor and the capacitor, and the source sees a resistor because the Xl and Xc cancel each other, just like a Tesla coil. A resistor across a source of AC represents a 45 degree difference, or a power factor of 0.707 times the product of the voltage and current.

When you tune a series resonant circuit slightly off resonance, the source will once again begin to see reactances, and the phase angle will shift. While we don't know exactly where it is, we know that it has to be somewhere between zero and ninety degrees, so that the power input is equal to voltage times current, times some value between one and zero. Even if it is one, the MRA is well over unity while in the "max gain" mode.

Reactances limit current but do not dissipate power, with the exception of leakages and distributed resistances. However, a pure resistor will certainly dissipate power, while adding nothing to the circuit. See what I mean?

Now, in reviewing the data which we received, the input power at the max power mode is given at 3.168 watts, based upon V squared/R equiv, but no power factor is applied. Since the series resonant circuit, at peak resonance, is a resistor to the source, the power factor should be 0.707, and the input power should therefore be 2.24 watts, slightly below the 2.473 watts of DC output power.

In other words, the primary current of 150.42 ma is equal to the V-in MRA of 21.06 divided by the effective resistance of 140 ohms. When you multiply them together, you get 3.168 watts, but unless it is DC power, which it isn't, you have to multiply it by a value less than one, and in a resistive circuit, that is 0.707, so the power input for comparison with the DC power output is less by 233 mw.

The comparison, however, is made using the avg V-in*I-in, which is 4.566, which says that the sine waves, which are not pure sine waves, have a greater amount of power than if they were DC! Hello?

We don't have the equipment to measure average values of waveforms, but when a circuit goes from resistive to reactive, current and therefore power go down, ESPECIALLY in a series resonant circuit. And, pure sine waves have more inherent power than distorted waves. Measuring distorted waveforms as average is how that other guy, I can't remember his name, THOUGHT he was over unity, but was wrong. You know, the "firefly" circuit.

Now, looking at the power comparison in the max gain mode, you have 23.84 VAC divided by 1900 ohms of equivalent resistance, or 12.5473
ma. This correlates to the V-squared/R-equiv value of 0.299 as 23.84 times .00125473 exactly as

shown. Since we don't know the phase angle in max gain, we'll just leave it at 0.299 watts for now, and eat the power factor. Regardless, we have 1.604 DC watts on the output.

Now, the avg V-in*I-in is given at 3.265, which means that the average current has gone from 217 ma to 137 ma, or over ten times the current
which we estimate based upon equiv resistance. By comparison, the current as determined by the avg V-in*I-in in the max power mode is 217 ma, or about 67 ma above the value based upon 140 ohms of equiv resistance... so the current is decreasing (from 217 to 137 ma) as per the test data, but is still too high for the MRA to achieve unity. ... OK... Now let's look at our test results by comparison.

I've measured the actual impedance of the grain-of-wheat lamps at 20.77 ohms at the resonant freq of the MRA. If the current were 137 ma, the lamp would be dropping 2.85 VAC. Put another way, that would make the effective impedance of the rest of the primary equal to the ratio of this drop to terminal voltage times the 20.77 ohms. 23.84/2.85 = 8.36, times 20.77 = 174 ohms, and therefore the current is 137 ma.

Of the 20.77 ohms impedance of the lamp, five ohms is resistance. Now, the inductive reactance will consume no power, but the five ohms sure will! That is why it lights up, as the resistive element of the coil (the filament) draws current and gets hot. So, if the current really is 137 ma, the power consumed by the lamp is almost 100 mw. That's a VERY BRIGHT grain of wheat lamp at its max rating, not the dim lamp that you are seeing. Measure the drop across your lamp, and divide it by five, and you will have the true primary current. Multiply this by the terminal input voltage, times 0.707, and you will have input power. Even still, the resistance of the lamp is consuming power, so you can determine that power, deduct it from the total, and then get rid of the lamp. Just multiply the current by the drop across the lamp, and multiply that by .707, and subtract it from the previous input power amount, then get rid of the lamp.

There's no point in having ANY resistance that you don't need in a reactive circuit.

I'm sure someone will analyze the data and recognize the obvious error of not applying the power factor to the max gain measurement. However, the other part, the average V-in*V-in [V-out ?], cannot be determined because it came from data which was only available when the report was written. However, since we know the input voltage, the assumption is that current is very much higher... and yet the wheat lamps tell us otherwise... Measurably, if you use the 5 ohms of resistance.

I am satisfied that we are right. Now we have to prove it. ~ Joel

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01/26/95
From: JOEL MCCLAIN ~ To: NORMAN WOOTAN
Subject: Correction to last message

Hi Norm: I accidently left out a part in the previous message, and it is very important! In using the grain of wheat lamp to determine primary current, FIRST you have to find the amount of the voltage drop that is resistive only. That is the ratio of five ohms to 20.77 ohms of impedance, or 0.24. Multiply the voltage drop across the lamp by 0.24 to get the resistive voltage drop. Then divide that amount by five to determine the current. You can use that current as the series current for input power. ~ Joel

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01/26/95
From: NORMAN WOOTAN ~ To: BILL BEATY
Subject: MRA

Bill: I hope you have been following the most recent messages between Joel and I and posting them to Internet for things are going to get real interesting from here on. Oh! before I forget it there are two gentlemen out there on Inernet that have their heads "screwed on correctly" in Ray Tomes and Ed Harada. If you will have Ed Harada leave his address I will make sure he gets a magnet and pizzo to build his very own MRA since he has won the "cigar" for his "astute" observation as to the phase angle actually in the MRA circuit between the piezzo and the saturated magnetic core coil of the primary. If in fact the phase angle was as he stated the possibility of then we have "worst case stated" the I/O ratio. Excellent observation on his part. Please contact him so I can get his mailing address. ~ Norm

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01/27/95
From: NORMAN WOOTAN ~ To: DAVID WYLAND
Subject: MRA Testing Results

David: We have conclusive proof that this MRA is over-unity and we are at present building the oscillator and necessary driver circuit to make it stand alone. Don't believe everything you read regardless of who originates it. Believe me, this thing is over-unity and we are going to prove it once and for all. Just hide and watch. As before all progress will be reported in full so stay tuned. You won't see any white surrender flags flying over my or Joel's lab bench. More as we make progress. Keep the faith and thanks for the recomendations. We have already covered most of them but others on the net can profit by your contribution. ~ Norm

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01/27/95
From: NORMAN WOOTAN ~ To: DAVID WYLAND
Subject: MRA Testing

David: you were correct to assume that we had thought out the testing proceedure and yes (to answer your question) we knew exactly what the
outcome of the test would be by adding a "lump" resistance to the circuit. It kills the over-unity

effect "dead as hell". All three of the testing parties were told that this would happen. Now if you would please go back to the starting point and read the whole thing over then you will not come back and suggest placing a "lump" resistance value anywhere in the input circuit to derive a current value. It just cannot be done this way for it completely alters the MRA into as Hal stated "an ordinary series resonant transformer circuit". Put you thinking cap on for there has to be a method of determining input current and not "close the P channel". What would you say if I told you that Joel and I fine tuned a MRA last night and had the voltage and current wave forms exactly 180 degrees out of phase at the input of the MRA? See there is something real peculiar here for between the piezo and the coil the phase angle was 90 degrees. Comments?? Norm

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01/28/95
From: JOEL MCCLAIN ~ To: DAVID WYLAND
Subject: Alpha and Omega

Hello David: You are most kind in your offers and that is truly appreciated. The basis for our beliefs concerning the use of a resistor for testing the MRA... There are, of course, distributed resistances in any circuit. If there weren't, every circuit would be at unity.

The effect of directly coupling poled devices with tetrahedral lattice structures is that the devices will break into resonance when an external potential is applied. This is why the Nieper ring, which led us to the MRA, resonates a rich blend of harmonics at over ten times the alpha cutoff frequency of the transistors. Transistors are made of silicon or germanium, both of which have tetrahedral lattice structures. The key to the resonance is in the PHI relationship within the lattices. Please read the file PHI&RES.ASC for the background work on this.

PHI and the Fibonacci series is how nature works. Even plants grow according to the Fibonacci series. A plant will grow a leaf, then two more, then three more, then five more, then eight more, etc. These relationships are imbedded in the fabric of all existance.

Many cases of transistor circuits going over unity have been reported and the result is normally destructive to the transistors. How many times have you heard of this as "spurious noise"? Engineers add... guess what... RESISTORS to eliminate this "noise". Since the devices aren't designed to handle the extra power, they HAVE to do that. If you want examples of this, let me know. Sometimes the transistors will shoot out lasers, as seen by Lawandy, and reported in "Nature".

The MRA also uses poled devices (magnet and piezo) with tet lattices and applies an external potential. However, we apply the potential at resonance to "kick start" the effect, and let it build up for an hour to get the most harmonics. In so doing, we are taking advantage of the "hidden" potentials which exist across ALL standing potentials in the form of biwave pairs, according to Maxwell, et al.

The biwave pairs are frequency matched to the MRA harmonics to add POTENTIAL... which then is "seen" by the flux of the magnetic ferrite

core to add electrons (up to the saturation point) for a net increase in power. However, this power will be consumed by a cumulative value of resistance, and it will appear that the power is coming from the source! Now, we've been able to add a "resistance" in the form of a lamp, which has an effective impedance of 20 ohms, only 5 ohms of which is resistive, and this lessens the effect, but does not kill it as a pure resistance will do.

01/31/95
From: JOEL MCCLAIN ~ To: ALL
Subject: Transcension and the ether

Transcendental numbers are, as most people know, indeterminate. The decimal fractions will continue infinitely without repeating. Another way of saying that is to say that these ratios cannot be contained in 3-space. In the file PHI&RES.ASC, work was begun to show how these ratios, specifically PI and PHI, relate to natural geometric vibration as perceived in harmonics and octaves of music. Later, these same ratios were used in an application of resonant geometry in the MRA, and most recently as seen in Stewart Harris's TMI device.

I keep asking myself, "where is this all leading?" We know this is really very, very old knowledge, because it was APPLIED by people long ago. In their analogy, the basic elements of earth, air, fire and water were contained in the first four Platonic solids, all of which are PHI based. The fifth Platonic solid, the dodecahedron, was the representation of ether. PHI and resonance are inextricably linked to ALL of reality, both inner and extra dimensionally. Ether (the dodecahedron) was THE MOST SACRED of the geometries. However, as a Platonic solid, it can be contained within both the cube and the circle... implying that the ether is within. Maxwell agreed with this.

The dimensions outside of 3-space are actually within as seen by the Platonic solids. The atomic lattice structures of cube elements are already "tuned" to the ether. The cube is the nested tetrahadron. The lattice structure of silicon is a tetrahedron. Transistors can break into free oscillation, and the etheric energy causes them to produce energy above unity, because the PHI (transcendental) ratio is within.

However, the cube, which contains the dodecahedron, can also be contained within the sphere, and when two spheres intersect into each other at the center, the result is the vesica pisces, also a PHI ratio and within which (at the neutral center) the natural vortical spin of all energy occurs. Particle spin of atoms is the result of this relationship. It is etheric energy.

We as people are linked to these geometric relationships from conception, and we are transcendental beings. That is why the Incunabula type of dimensional shift is an innate capability, but the process is learned through the understanding of sacred geometry, and applying it in relation to our dodecahedral component. All of the answers are in the geometry... from the 13 wavelengths of light which will cure any illness, to free energy, to any possibility.

I suggest that those who have tunable musical instruments might want to retune them to the PHI based transcendental frequencies, and use the musical vibrations to tune their own vibrations to the ether. Using only the whole notes, as practiced by the ancient Greeks, is supposed to be particularly balancing. It is one thing to be aware of the PHI and resonance links to extra (inner) dimensionality. As was done long ago, however, we can now begin to apply them, which is why are here.

We've spent a long time either ignoring, denying and defying nature, and we can see the resulting decay of our species and our habitat. We really need to become aware and then apply balancing principles now.

02/01/95
From: NORMAN WOOTAN ~ To: GLENDA STOCKS
Subject: TMIDEVIC

Glenda: Joel and I have worked out a full sustaining method of making the TMI not only run itself continously but generate power in the process and if you so desire take "flight" just like the Searl Disk. Last night I went out to Joel's and we had a long visit during which we worked outr a lot of the details as to how the device actually worked and how it related to the Searle rollers. After I got back home I ran several test on the magnet runner for I was interested in the relationship between the fixed track portions and the rotating magnetic runner or roller. The interesting phenomenon here is that the runner has to be rotating or the device will not provide the necessary thrust to continue to move. One very interesting point that Stewart mentioned was that he used the "tinker toy" wheels to slow down the roller. Well what I did was increase the spin rate of the roller or runner by the Phi rate in relation to the fixed magnetic track and found that the intersecting vesica pisces vortex patterns were multiplied to the extent that this thing has incredible thrust and does not need the broken segments in the track as per the original plans. The track can be a continous vortical or helixal magnetic flow with the runner magnetic vortex intersecting at 90 degrees to provide 3D nested visica pieces vortices. Very interesting little device which as Joel properly put it, "This dog will WARP". A very true statement for what you will have created is a very simplified version of John Searle's SEG. For you non-indoctrinated out there that means Searl Effect Generator. This thing properly constructed will not only run itself, but generate plenty of excess power in the process. The biggest problem you are faced is that if you ever lose the load on it you will have the same problem that John Searl had, in that your home powering generator will simply accelerate to the critical velocity of the rollers and simply fly away leaving a hole in your roof. All kind of possibilities here. Thanks for sharing this little device with the world. Everyone will have fun with this one. ~ Norm

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02/03/95
From: NORMAN WOOTAN ~ To: ALL
Subject: Another MRA

Sam Faile, who writes for New Energy News up in Cincinatti, sent me a document which is very interesting for it is from an individual who wishes to remain anonymous at this time but wanted to make a contribution. Basically this man has another take off on the MRA.

HISTORY: (1993) Circuit was originally intended to produce series of time decrement pulses for anti-gravity experiment (concept of an expanding E-M wave form). Never was taken beyond breadboard level. Other projects took precedence. Had intended on feeding expanded pulse sequence into various trancducers to look for unusual effects.

Description: A positive sawtooth wave of about 24 V P-P is generated by a simple N-channel JFET oscillator. This signal is coupled through a
capacitor to a 555 timer chip which is configured as a voltage controlled oscillator. The output of the 555 then consists of a +12V pulse train, wherein each pulse is of a duration period of twice as long as the pulse before it. The pulse train is contained within an envelope about 10-15 us in duration. When this pulse sequence was fed into a ferrite core inductor, instantly a tremendous voltage rise occured! A nearly pure sine wave of about 130 V P-P was measured across the inductor. It is unknown if any substancial power was developing in the inductor, however a neon lamp across the unit lit very brightly without diminishing the magnatude of the sine wave. No attempts were made to try to couple this energy into a secondary circuit for I-V
analysis. (Could be done with a secondary winding added over the primary of the inductor).
Objective: This effect may or may not embody any unusual or new principles. I found two aspects to be unusual: (A) The production of a sine wave across the inductor with 130 V P-P magnitude; (B) The fact that this voltage does not blow out 555 chip or the op-amp.

Applying the decrement pulse train to an iron core coil, or an air core coil or a quartz piezo transducer did not produce any unusual effects. This information is being released in light of the developments by N. Wootan and J. McClain and others. If barium ferrites or other ferrites are found to posses the ability to store energy, or "ring", then maybe the actions of my aforementioned device add up. Hopefully, any who are currently working with barium ferrite might find value in this circuit. Best of luck. ~ G.A., Wichita

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02/04/95
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA Tech Bulletin

Well, just for grins I built a "super MRA" which is in the form of a right cylindrical magnet section with large flanges top and bottom made of plexiglass so I could wind a very long wire primary and secondary coil so as to be able to play some turns ratio games without having to take the unit apart and rewind each time I needed to change ratios. I did this by winding 18,000 feet of wire on the magnetic core with taps brought out about every 1000 feet of winding. This way you can play some interesting games not only with impedance matching but also with wire lengths in the windings for resonant tuning as we do in Tesla Coils. Any one interested in building the MRA and fine tuning it to peak out the performance should consider this approach for it provided me some rather impressive data. Now there is no doubt about over-unity for I

have been able to back off to practically nothing the input power to the unit and maintain a healthy output. I am seeing the input potential from my source amplifier being trippled from an idle available source voltage of 48 VAC goimg up tp 160 VAC with the MRA tuned to max gain. You can place a grain of wheat bulb in the primary of the circuit and it will not even light at all while driving a 120 V 3Watt standard bulb across the bridge rectifier. Real interesting what happens when
you approach a near perfect impedance and resonant match in the windings. This is something that we wanted to do in time. That is the point all should consider, that is all this takes valuable time and it will be done by not only Joel and I but by others out there who are serious researchers such as Hans Becker and others. ~ Norm

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02/08/95
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA Test Results

I have been rather quiet on the subject of the MRA test that was conducted for I have let Joel handle the responses since he is more diplomatic the I. Well I have a few comments for all who are interested to really ponder. First, let us consider the true nature of the piezoelectric element in the MRA. This is probably the most "NON LINEAR" device that man or nature has ever constructed. Everyone knows just how NON-linear they are especially when I can hit the piezo with a simple pulse of 57 V and get a return of over 1000 V as a response from this little device. Now let us look at the peculiar little MRA coil. First we start with a totally "saturated" magnetic core with a primary coil and a secondary coil wound directly onto the magnet. We are "ringing" the crystaline lattice structure of the BaFeSi material that composes the magnet therefore this component is also "TOTALLY NONLINEAR". What do you get when you couple two "TOTALLY NON LINEAR" devices together into a series resonant circuit where we are driving one element 3 octaves above the other and producing 9 harmonics and purposely detuning the circuit to cause one of the harmonics to beat
against the incoming current from the signal source to cause the MRA to achieve over-unity??? Well if you haven't figgured it out yet you have a circuit that does things that are "NOT IN ANY TEXT BOOK PRINTED". Joel and I have spent countless hours looking at results of simple experiments conducted with the MRA that simply defy all EM theory or logic. Now "please" consider what I have said about how "NONLINEAR" this whole device is and go down to the last line in the file MRACLAR.ASC and read the recomendation that we should read "Principles of Linear Networks" by Friedland, Wing & Ash, McGraw-Hill, 1961. I highly respect Hal Puthoff and his theoretical abilities but in the case of the MRA, I'm sorry the "light has not come on". This circuit is over-unity and we are still proceeding with the driver circuit to make it obvious to all who wish to see and "believe". ~ Norm

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02/09/95
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA Testing

This question goes out to Tom Bearden and Walter Rosenthal who are on the same "sheet of music" as to the testing of the MRA. I have gone
back and degested all of the available info on the Maxwell approach to the MRA device and Tom is right on in his analysis that you simply
cannot use a "FLATLAND EM" (classic EM theory) approach to this circuit. If you go back and study Maxwell's model in quaternions you
begin to appreciate the "higher topology" possibilities and see the Whittaker bi-wave pair coupling in the circuit. I see the same current wave form that has puzzled Walter in his analysis of the input to the MRA. When you fine tune the MRA to a maximum gain where the current wave form is a complex wave on the scope with a leading and lagging sine wave form aproximately 45 degrees apart with a complete "fill" of rich harmonics of various magnitudes then you are getting a picture of what is really happening in the input. Is this complete fill in of the complex current wave form an indication of "time forward and time reverse" biwave EM pair coupling taking place before our eyes. Walter has photographed this phenomenon and states that he has never seen anything like this before in conventional EM analysis. I along with Joel have studied this current wave display and have concluded that it is the key to the MRA over-unity display. Only when you have this complex current wave form does the MRA display the over-unity traits. This is the prime area that has to be resolved to better understand what is really happening in this circuit. Norm

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02/22/95
From: JOEL MCCLAIN ~ To: ALL
Subject: MRA confirmation

Just thought I'd share a note with all on a test report from Greg
Hodowanek, who built his own MRA and is getting ten times unity.
Greg is using a silver mica 680 pf capacitor instead of a piezo at low
signal level input (piezos sink voltage) and a Radio Shack BaFe magnet
with a part number of 64-1877. Greg's test results were sent to
Hal Fox at New Energy News, and to others. Many of you are familiar
with Greg's work and files here on KeelyNet for gravity wave detector
circuits. Hope others also do the same as Greg has done, and also
share their results. ~ Joel

03/02/95
From: JOEL MCCLAIN ~ To: CHRIS FLAMIG
Subject: Bootstrap designing

Hi Chris: Greg's report is four pages long, including the cosmological study. He states that his Rhysmonic Theory describes the power gain of the MRA. Based upon the experimental results and conclusions, I think that he very well understands the aetheric 'interface' with 3-space. His gravity detectors are working proof (I have built one) of the soundness of his theories.

He measured the same source current reduction which Norm and I have documented, with the same (but higher) power gain at the load. He used a signal generator which is only capable of 4mw max output, which the MRA drove down to only 1.85mw. At the output he measured 18.5 mw. With the components that he used, the max power frequency was 90KHz, and the max gain frequency was 100 KHz. Interesting that he increased the freq for max gain, as this causes the circuit to increase its inductive reactance and to decrease its capacitive reactance. This increases core saturation, enabling more free electrons to couple with the excess potential provided by the piezo effect in the series resonant circuit, and thus providing output power above unity to the load.

Greg used two different transformers and got similar results. The first was a small potted xfmr with a ferrite (not magnetic) core, and it was marked 5.0 mh and 5:1 ratio. The second was an ordinary 125 VAC to 25 VAC xfmr into which he inserted two of the R.S. magnets. In both cases, he achieved above unity results. Since he used the parts which he had 'on hand', by understanding the theory, I suggest that you could likely do the same and get similar results.

I think that the transformer which has a non-magnetic core is acting more like a magneto than a virtual rotation generator, as the core is reacting to the alternating cycles of input where the voltages are 180 degrees out of phase but the currents are equal and in phase. In other words, the magneto effect is creating a magnetic "bubble" which "moves" 180 degrees with each cycle, but never dissipates because the resonance of the circuit "breathes" it virtually "in" and "out". The alternating polarity of the "bubble" blocks primary current, as it is a sphere of influence which opposes the source sphere.

The source sphere is essentially counterrotating, and as long as the circuit remains in balance (resonance), each alternate half cycle has an aetheric counterpart which finds a "home" in the output load. Somewhere in between a weak magnet with a lot of ferrite and ferrite which has not been magnetized, but which magnetizes and "flips" at resonant half-cycle intervals, we will find the optimum core, and it may vary by design as per load requirement. I don't want to get too wordy here, but the main idea is to use what you have, which is what Norm and I did, and is also what Hans B. and Greg H. have done, and all have been successful. Have fun! ~ Joel

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03/05/95
From: BOB PADDOCK ~ To: ALL
Subject: "McLain & Wootan"

You know you've left your mark on the "Free Energy" world when you rate a footnote in one of T. E. Bearden's articles:

In the just out Explore! magazine, Vol 6, #1 appears: "Vacuum Engines and Priore's Methodology: The True Science of Energy - Medicine Part I of II" by T. E. Bearden.

Under the heading of "Vacuum Engines: Ordering and Utilizing the Vacuum Virtual Particle Flux:"

"This VACUUM ENGINE now does the work and furnishes all the working energy. We just have to pay to set up the GATING MECHANISM AND THE TEMPLATE in the beginning, and continue to play a little bit to sustain them. Literally we have created a stupendous ENERGY AMPLIFIER. [19]"

19: "As example of such an actual amplifier was Floyd Sweet's vacuum triode - [Long dissertation about Sweet which ends with ->] Unfortunately nothing can be done with the device - e.g., because of formidable legal entanglements due to the conflicting agreements Sweet made with different financial backers. However, McLain & Wooten has produced a repicable, tested over unity device & full construction details have been rebuilt on Internet." [Rebuilt? Odd use of the word.]

Some thing else that has been discussed here recently under the heading: "Mind, 3-Space, Hyperspace, Mind Flow, and The Flow of Time:"

"Normally, so QM tells us, the observation process destroys time, so that all "observables" are spatial only. So the completion of each observable change in a living mass system momentarily destroys the only connection that the mass had with associated mind! It vanished in the so-called "collapse of the wave function." [26,27,28]

28: "Since the entire area is highly nonlinear, then nonlinear oscillator theory applies. Gravitation lattices may therefore be activated harmonically or subharmonically. This means that "optical band" results can be initiated by analogous subharmonic input - e.g., microwaves or even sound waves. G-lattices work like music; one recognizes a C-chord regardless of the octave. In similar manner, vacuum engines (G-lattices) may be shifted by any number of octaves, with initiation of results then being delayed in the responding physical systems, and prescribed by nonlinear oscillator theory."

The article describes other, hum, "Interesting" effects of this type of Engineering, that personally I would want to avoid. Always good and bad in every thing... You can contact Explore! at EXPLORE Publishing P.O. Box 1508. MT. Vernon, WA 98273. (360) 424-6025. Part II is due out in April.

03/06/95
From: JOEL MCCLAIN ~ To: ALL
Subject: Repeat of Hodowanec's Test

Brother Norm (we've adopted each other) came over tonight with a very small MRA, so that we could try the test previously done by Greg Hodowanec. The transformer consists of two of the rectangular R.S. BaFe magnets with primary and secondary wrapped around them.

First, we tried using an ordinary electrolytic capacitor for the piezo, and that didn't work...couldn't even get unity out of it. Then we put a tried-and-true piezo in the circuit, and commenced to tune it. It peaked at 33.4 KHz, so we tuned it up to 40 KHz, at which all current

ceased to flow. We tuned it do 34.1 KHz, at which point we had 73 microamps of primary current at 11.8 VAC, or about 0.86 milliwatts.

The output measured 6.2 milliamps at 1.915 VDC, for 11.87 milliwatts. This power difference was also obvious in the LED brightness, as
described by Greg. The gain computes out to 13.8 times input. Greg found 10 times input, using a planar capacitor instead of a piezo. Norm and I used the old reliable HP-200cd sig gen for input.

The key, as always, is in the tuning for max gain. It's necessary to increase the frequency, as Greg described, and as Norm has been doing all along, to make the circuit primarily inductive. I goofed in some of the early tests by DEcreasing the frequency, and I hope that didn't cause too much confusion.

I think that it's important to mention the need for co-inventors on projects like this, as illustrated above, it's so very easy to make a dumb mistake that doesn't otherwise get corrected. Without both of us, there would be no MRA. The total is always greater than the sum.

We both have had the same vision and shared the load as each of us was best able to do. That's why we be bro's now. Keely may have
been able to do it solo, and Tesla too for that matter, but the rest of us always work better when we work together. ~ Joel

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03/12/95
From: NORMAN WOOTAN To: JERRY DECKER (SYSOP)
Subject: MRA

Jerry: Re: your notes on the MRA as to being over-unity and the availability of the parts we are useing. I was in Tanner Electronics last week and he offered me the last 50 piezzo's he had. They are still available but no one is asking for them. I put out the info on the magnets we are useing (IBM 3380E hard drives, drive model 391X). I have personally, at my expense shipped out 30 of these magnets to interested parties. Joel and I are working on the elusive standalone demo but this is not as easy as it may sound to you. The anomolous characteristics of this device has taken out 3 of my audio amps and 2 more scopes plus two frequency counters eventhough I have taken great care in trying to isolate this equipment best I know how. If there were nothing to this circuit then we would not see all this anomolous behavior that cannot be explained by conventional theory. When we attempt to build a self-sustaining oscillator, it suffers the same fate that the test equipment experiences. I'm so frustrated that I am about to turn to a simple Tesla air core tuned Tesla coil with spark gap to get away from transistors which are "self targeted" by the bi-wave coupling (scalars)
reflected in the primary. This circuit is "destructive to solid state devices". If you haven't been there like Joel and I then you don't have a clue as to what is happeneing in the circuit. It looks so simple, two components in series resonance. Simple, no, for they are the two most "non-linear" devices we could have come up with. The totally saturated barium ferrite core transformer is just

reverse of conventional transformer theory where we drive the core towards saturation. In the MRA we are driving the core out of saturation at a 3 octave down freq from the piezzo. The piezzo is also a very "nonlinear" device and when you couple the two components together in a series resonant circuit you have a lot of "wild cards" that you don't even know about. The text books do not cover this device therefore we are "plowing new ground". Hal Puthoff and Scott Little saw this and had to fall back on conventional theroy to try to resolve the anomolous behavior of the circuit. Joel and I elect instead to try to resolve the "anomalies" of the MRA and not just apply conventional theory and sweep it under the rug. This circuit is not going to just "go away", I promise. We are doing all we can with our meager budget and time available. As to duplicatability (big word), why can't others do as Greg Hodawanec did and build a MRA with off the shelf (Radio Shack) magnets and capacitor with LED's used to demonstrate the circuit behavior. Joel and I have done the Hodawanec test and it works. This takes about 30 minutes of time and about $5 worth of parts along with a sig gen to provide the excitation. Simple enough, but try to get
someone to build one instead of sitting back and waiting for the proof to come from others who are really trying. WE ARE TRYING TO GET AN
OSCILLATOR THAT IS SUITABLE TO RUN THE MRA "standalone". Norm

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03/12/95
From: NORMAN WOOTAN ~ To: ALL
Subject: MRA

The most recent discussion as to whether the MRA is truly over-unity was to be expected. The biggest problem here is understanding what is going on in the circuit. Tom Bearden explained the whole theory of the MRA with the Whittaker bi-wave electron pair coupling in the primary of the circuit which produces "scalar" potential that are reflected back into the signal source. These potentials being "scalar" cannot be attenuated or blocked for as we have already seen with the "Frolov" single line transmission experiment. The accumulation of this "virtual potential" in a transistor or solid state circuit literally destroys all. Between Joel and I we have all the "proof of this phenomenon in "dead, expensive equipment". I bought a nice (second one) audio amp from Radio Shack, brought it home and hooked up on of my advanced prototype MRA's driving 25 watt T8 flourscent load, turned it on at very low signal output and immediately blew up the amp. Radio shack repaired it after replacing the power transformer, the output transformer, the full wave bridge, and all the final output transistors. Yes, it blew the line fuse but this all took about 10 seconds of operation of the amp. The "E" section of this net was set up by Jerry so as to give us a forum for a small group of like-minded researchers to resolve problems and discover new energies. Let's work together on this problem and not point fingers as to not comming up with "conclusive" evidence as in the case of the MRA. Joel and I don't have all the answers. Frankly we are in a quandry as to how to solve the perplexing problem. If we can't rely on solid state compoments because of the "scalar potential" problem, then we may have to fall back on some old non-solid state solutions. I even picked up some fiber optic material for possible doing some optical isolation between equipment and MRA under test. If any one out there in "E" has ideas, let's hear them. ~ Norm

03/14/95
From: JOEL MCCLAIN ~ To: RICK WOOD
Subject: Tune above resonance

Hi Rick, and thank you for your timely message. I think that it may clear up a lot of questions that others have as well. We are using the piezo both as a capacitor and as a piezo. As a capacitor, it completes the series resonant circuit. A series resonant circuit develops potentials across the capacitor and the coil at Q times the source voltage, and at resonance the voltages are 180 degrees out of phase. The currents, however, remain in phase.

If you tune below resonance, the circuit becomes net capacitive, and if you tune above resonance, the circuit is net inductive. Xl=2PIFL. Increasing the frequency into a net inductive region creates a virtually lossless circuit, where current can be calculated within 1% without even considering resistance. At peak resonance, where Xc=Xl, the circuit is pure resistance.

At the upper resonant range, the lossless circuit can transfer power to an output, and yes the load is reflected into the primary, so it is necessary to retune when the load changes outside the frequency range and causes the source current to increase. However, the Q of the circuit is equal to the Q of the coil alone in this mode.

So far, standard textbook theory. Using a barium titanate piezo and a barium ferrite magnet at their resonant frequencies creates a ringing of harmonics which couples additional energy to the circuit. This can be both heard audibly and seen on the scope display. It is the same ringing which can occur in transistors and cause them to burn out as a result of excessive energy, except that these components will not burn out. We couple the energy to the load. Some folks call this 'harmonic distortion' or 'spurious oscillation', but we call it useful energy.

When this happens, the piezo and magnet become phase conjugate mirrors (PCM), and instantaneously couple potentials, which are then matched to electrons from the stressed piezo as well as from the saturated ferrite core. Interestingly, when the piezo is removed from the circuit, it will continue to regenerate finger-zapping charges for quite some time, as you discover when you pick them up. However, when the instantaneous potentials "mate" with electrons, power results.

The core, after being deenergized, will also ring on and off from time to time unless you put it in a freezer. Now, having a Hodowanec MRA here and in test, I have found that the barium is not necessary, at least in very low power designs. The power gain is both measurable and visible in the LEDs on both the input and the output. There is enough piezo quality in the silver mica capacitor to provide the electron coupling for energy stored in the coil, while returning very little to the source. Because the circuit is very low loss, the energy is coupled via a secondary to the load for a net gain.

I know the relationship of capacitors in series and in parallel, and the effect that has on frequency. However, we have found that only one piezo per MRA will work at a time, because

no two of them are exactly the same. The capacitance wouldn't matter that much, but the electron coupling has to be precisely phased.

Thanks again, and take care. ~ Joel

Richard (Scott) McKIE

PODMOD

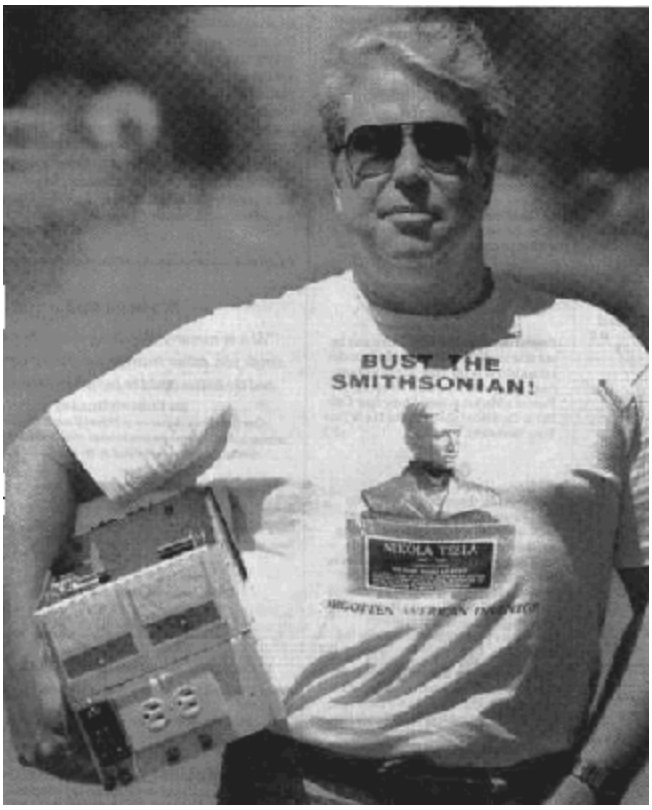
KeelyNet BBS
(MCKIE.ASC // MCKIE.ZIP // MCKIE1.GIF // MCKIE2.GIF)
***Seattle Times* (June 23, 1993)**

The McKie PODMOD

If he's right, the world will hear of this man

by

Terry McDermott
Seattle Times staff reporter



Scott McKie, engineer, inventor, entrepreneur and would-be violator of physical laws, lives in Ballard, the center of sensible citizenship. He drives a four-year-old Ford, wears polo shirts and deck shoes and his coffee table is covered with issues of Sunset and Modern Maturity magazines.

He is far from the image of the wild-haired, bug-eyed mad scientist but what he wants to do -- is on the very verge of doing, he says -- is bug-eyed science, indeed:

Manufacture a power generator that will perpetually produce more energy than is fed into it; manufacture, in other words, perpetual-motion machines that will replace the world's electric power grid by the turn of the century and internal-combustion engines somewhat thereafter.

This raises at least one obvious question. Is McKie nuts?

Asked to evaluate someone who has spent the better part of a dozen years single-mindedly pursuing an idea most people find ludicrous, Blake Andersen, a local psychologist, said that generically speaking, lots of people do lots of weird things. We live on a continuum of odd behavior.

"You can't place a value judgment on whether it's functional or dysfunctional. It's results-oriented," Andersen said. "The degree of dysfunctionality depends on the environment and the results." Andersen then began to explain some symptoms of obsessive behavior but, in midsentence, interrupted himself to ask: "Does it work?"

Engineers by their nature are not off-the-wall people and, although McKie admits going through several jobs and bank accounts in service of his idea, he is in other ways a very practical man.

Witness the collection of financiers, planners, engineers and marketing people he has collected around himself. If he is a mad scientist, he's one with a business plan and a $10 million line of credit.

But he is also a devotee of Nikola Tesla, a turn-of-the-century Serbian-American inventor, who, by all accounts, was a mad scientist with countless phobias and odd personal habits. His psyche, wrote Margaret Cheney, a biographer, was a "festival of neuroses." He swore, for example, he could hear a fly land on a table. He threw kisses to pigeons. He held lightning in his hands. He had an obsessive fear of germs and required precisely 18 linen napkins be set on his dining table so he could clean and polish his silverware every night before eating.

He felt compelled to walk around the entire block where his Manhattan laboratory was located three times before entering its door.

At the height of his celebrity, he hobnobbed with Mark Twain, J. Pierpont Morgan and the Vanderbilts and was regarded as one of the greatest and most important scientists in the world, an arch-rival of Thomas Edison.

Edison took the competition so seriously he waged a fierce disinformation campaign against alternating current, which Tesla promoted as the best means of generating electricity in large amounts. Edison favored direct current, the status quo. Edison derided alternating current as dangerous. He hired a man to go around the country electrocuting small animals with alternating current just to prove its dangers.

He also promoted the first execution of a criminal by electrocution for the same reason. (The pitch was straightforward: If alternating current can kill criminals, do you really want it in your kitchen?)

Tesla ultimately won out and virtually all the electric power used in the world today is generated and transmitted via descendants of Tesla's systems.

In addition to the alternating-current motor, Tesla also invented wireless communication -- that is, radio -- although the Italian Guglielmo Marconi was falsely credited and most general reference books still reflect this.

Partly this was caused by Tesla's compulsive secretiveness and his habit of conceiving an invention in his head, then going on to his next project without bothering to actually build or even make a written record of the thing. Without such physical evidence or even clear explanations, it is hard to know exactly what Tesla was talking about much of the time. Scientists still puzzle over how he achieved some of the things he did.

This has helped obscure Tesla's place in history. Now, although references to him litter diverse segments of the scientific literature, his accomplishments are largely forgotten except among a group of equally diverse adherents who have a zealous devotion to his ideas.

Resurrecting 'resonance' theory McKie is a promoter of one particular idea of Tesla's, the notion that the power in an electric circuit can be amplified by a phenomenon known as resonance. Broadly stated, in a resonant circuit a small flow of electrons can cause a larger amount of electrons to move. This phenomenon was first discovered by Tesla and by now is well understood.

"Boilerplate stuff," McKie calls it.

"The knowledge is very old and had gotten lost," he said. "I've just gone back and brought it up to '93 specs."

The "'93 specs" consist of a device designed with two resonant tank circuits -- so called because they are able to store an electrical charge -- operating alternately. The first circuit can be made to simultaneously charge the second and send electric current out for other uses. The circuits can then be switched so the second recharges the first while also sending current out for other uses.

McKie thinks that if properly devised, the two circuits will produce more power than the total amount of power it took to set them in motion. Going "over unity," this is called. He thinks, in fact, the power can be amplified many thousands of times and the device can be disconnected from the power source that started it and continue running. McKie thinks such a system could operate indefinitely.

"In the field of electronics that sends them ballistic," he said.

Next step: POD Mods in Ephrata When you talk to McKie about the apparent impossibility of what he is trying to do, he invariably thinks you're talking about marketing the end products, never for a moment questioning whether any such products will ever exist. McKie has so little doubt his invention will work he is already making plans to manufacture boxcar-sized versions of it -- power on demand modules, or POD Mods, he calls them -- in Ephrata, Grant County. He has signed an agreement with a California investor for $10 million in start-up financing.

He's already planning an electric hydroplane to advertise his company. His single-mindedness is so complete he hardly even notices that his house is in foreclosure. He says things like, "If investors don't come forward here in the Northwest, I'll be forced to take the project overseas and, if it's funded there, they'll get to use it first."

McKie first achieved the over-unity effect accidentally in 1982 when he was working on a wind-turbine design for Bonneville Power. Trying to figure out what happened, and why, has shaped most of his life since. He duplicated the effect with a different electrical generator in 1984 and has, in some sense, been trying to do it again ever since.

He received a U.S. patent for the idea last year, constructed a working model, took that model apart and is now trying to convert the whole thing to solid-state electronics. The device he is now building, on a workbench the size of an espresso cart in his garage, is about as unprepossessing as you can get. It is a cardboard box sparely furnished with circuit boards and voltage meters. The whole thing is approximately a foot square, about the size of a bread box.

It uses no fuel. There are no moving parts.

Inside the box are a pair of tank circuits, electric circuits that include both a capacitor -- basically, an electrical storage unit--and am inductor -- basically, a coil. It is the interaction of the capacitor and the inductor that McKie supposes creates resonance.

'He's out on the edge of science'

Ira Myers, a physicist at the National Aeronautics and Space Administration's Lewis Research Center inOhio, has worked with McKie on the design of the individual components of his apparatus. He is cheering for McKie.

"It's possible but it hasn't worked yet," Myers said. "He's out on the edge of science rather than on the center line. But it's important to have people out on the edge. "I personally like a good fanatic every now and then."

Nick Butler, an electrical engineer at BPA in Portland, has supported McKie's work; his employer has not. "Whenever something new appears, it is often ignored," Butler said, citing a conventional analysis of change.

"Once it can't be ignored any longer, people attempt to suppress it. When they can't suppress it, they rush to embrace it."

Butler said he remains skeptical but thinks McKie might have as much as a 50-50 chance of being right. Others reject the notion that there actually is some sort of "extra" energy almost as a matter of faith.

"Theoretically it might be possible. Practically it can't be," said one electrical engineer who has reviewed McKie's data and asked that his name not be used. "You can't get energy from nothing. The thing as I saw it was nothing but measurement error that gave the impression of more output than input."

Even supporters like Butler do not necessarily buy McKie's explanation that the power comes from resonance. Where else might it come from? "I haven't the faintest idea," Butler said. .

What happens if he's right?

Gravity Bar, the local juice emporium, has a pineapple-lemon-ginger drink named for Nikola Tesla. There is also a Christian heavy metal band from Guam ("Rock for God") named Tesla, as

is an alien character in a recent science fiction novella who comes to Earth and bedevils patrons at an S&M bar.

The idiosyncratic David Lynch has expressed interest in doing a movie of Tesla's life. A local painter was inspired by Tesla to do a series of paintings of lightning in an airplane hangar, and Seattle City Light once commissioned a ceramic sculpture of Tesla's head that doubled as a planter.

This is pretty strange company to be kept in memory of the man who invented something as fundamentally practical as an electric motor, but a kind of shroud of the bizarre has settled around the traces of Tesla's genius.

Among some people that casts doubts on McKies efforts. Among others it lends credence. The debate about McKie's proposal is not irresolveable. At heart he is not a theorist but an engineer. He intends to begin selling his machines next year. What if he does? What if McKie's right?

Each production unit, McKie says, will be completely portable, will run off a 12-volt battery and will produce 10 megawatts of power a year (100 such units would power Seattle). In one brochure, McKie matter-of-factly ticks off some of the advantages. For starters, use of the devices would eliminate high-voltage transmission lines, eliminate conventional power plants and, oh, by the way, replace all other sources of power generation.

Then the environmental crisis will recede. Growth and prosperity will blanket the globe. An age of plenty will wrap humankind in its embrace and McKie and everybody who was ever nice to him will become rich beyond belief.

Somewhere along the line, McKie might even get his house out of hock.

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http://www.spiritweb.org/Spirit/free-energy-status.html

Richard (**Scott) McKie** (1991) has designed and tested a small model of a PODMOD device: a Power On Demand MODule.

The circuitry invokes Tesla's theories of electron flow, resonance, and magnetism, combined with modern theories on high frequency electronics and radio antennas to generate power directly, without the inefficient conversion of energy from other sources. A US patent has been filed and granted.

Scott claimes to be able to generate output power as much as 4,000 times the input power. Prototypes have been built and tested, including independent tests by accredited specialists.

Plans are currently underway to build full-scale commercial PODMOD units, to be housed in standard 40 foot shipping containers, each having a continuous base-load generating capacity of 10 megaWatts

The Tom Bearden Website
http://www.cheniere.org/misc/scott%20mckie.htm

From Energy Reverberation to Big Bang

This iterative additional energy interception and collection (divergence) from the huge, usually nondivergent Poynting energy flow that Lorentz mistakenly had everyone discard, is a very important *re*discovery -- certainly Heaviside knew it. We are just now beginning to see the full ramifications.

I have constructed a chart of some anomalous and powerful energies (such as from overunity EM systems to anomalous gamma ray bursters) and am awed that the new work-energy theorem (for multipass, multicollection) seems to be the missing principle that is involved in all of them. At the top of the chart (a series of curves), there stands a new kind of Big Bang.

In other words, for extremely rapid initiation, the energy density (asymmetrical self-regauging) of the system can rise so rapidly that it is sufficient to rupture 4-space at that region. So the rapidly increasing energy density just "blows out a hole" from 4-space into n-space, where n> 4.

Beyond the 4-space hole, in n-space there thus is formed (by the blowout) a new 4-space universe. So it seems that this is indeed a new kind of Big Bang, and a fundamental new change, striking at the very heart of astrophysics.

With the new theorem and the multipass, multicollection explanation, I was able then to propose an alternative explanation of how the Lawandy lasing without population inversion works (how the excess energy is extracted from the vacuum) and also the Patterson power unit, which has been replicated and independently tested (one version produced COP = 1200).

It is possible, in fact, to utilize energy flow reverberation, multi-pass collection, and asymmetrical self-regauging in a device which surges the energy to and fro along a "single wire circuit" between two collectors, with a load in the middle. Such a device can be permissibly achieve COP>1.0 without violating the laws of nature, physics, or thermodynamics.

Scott McKie's New Energy Device

Inventor and researcher **Scott McKie** has filed a patent application on an energy system using just such an energy reverberation and iterative energy interception and collection. In addition, it uses the novel fact that *by potential alone one can alter (rotate) the inertial frame of a component*.

Before the reader pops his eyeglasses, he should read "Quantum Aspects of the Equivalence Principle" by Aharonov and Carmi. We quote from p. 494:

> *"Not only can 'inertial forces' arising upon transition to a noninertial system of reference be cancelled by the introduction of 'real forces' (and vice versa), but the 'inertial potentials' belonging to such forces (even in 'force-free' regions) can similarly be cancelled. Both facts together afford a 'geometric interpretation' (i.e., as inertial effects produced by a change of reference frames) to <u>both</u> fields of forces <u>and</u> their potentials."*

In short, force fields and potentials can be interpreted as a change of reference frames, hence inducing rotation of the frame without concomitant propagation velocity of the object in question. This can in fact be accomplished in a capacitor, as McKie apparently has succeeded in doing.

So Scott apparently charges a capacitor in a rotated frame (without having to move the capacitor), where its capacitance appears much less in the lab frame (only the *projection* of the rotated capacitance into the lab frame). Then he sharply snatches the charged capacitor out of its rotated frame back into the lab frame, again without using capacitor motion. In so doing, its apparent capacitance as seen by the lab observer increases and so does its charge and energy (it is regauged from the vacuum itself). The interesting thing is that this seems also to be a process for impressing extra energy onto the Dirac Sea electrons, and lifting excess electrons out of the Dirac Sea, because the charge in the capacitor (as seen by the lab observer) seems to increase simply due to the charged capacitor's rotation back into the lab frame.

So Scott can apparently discharge more energy from the capacitor in the lab frame, than he was required to furnish to charge it in its rotated frame state. He has in fact utilized a very novel new way of extracting energy from the vacuum. Here again we caution that, due to its frame rotation, the capacitor actually receives excess energy (and charge) from a special kind of "external environment" other than the lab inertial frame. So again it is an open system, not in local equilibrium but switched in and out of equilibrium. Hence in theory it is permitted to produce COP1.0, if other things are sufficient.

Here we inject some additional information. It is not commonly known that, in general relativity, the energy is up for grabs anyway, and in fact it can be shown that there really are no ordinary energy, momentum, and angular momentum conservation laws in the accepted sense. In other words, the "normal" conservation of energy we are so used to, can be violated anyway. Even the great Hilbert knew this in 1917. Quoting:

> *"I assert... that for the general theory of relativity, i.e., in the case of general invariance of the Hamiltonian function, energy equations... corresponding to the energy equations in orthogonally invariant theories do not exist at all. I could even take this circumstance as the characteristic feature of the general theory of relativity."*

Russian physicists have long known this most interesting fact. E.g., quoting Logunov and Loskutov, writing about Hilbert's assessment:

> *Unfortunately, this remark of Hilbert was evidently not understood by his contemporaries, since neither Einstein himself nor other physicists recognized the fact that in general relativity conservation laws for energy, momentum, and angular momentum are in principle impossible.*

So while startling, McKie's use of frame rotation as a means of apparently violating the "normal" energy and charge law actually has a solid basis in general relativity, but one that is still unknown (or fiercely resisted) by most Western relativists. In our own view, again we prefer to think of this rotation and violation of charge and energy conservation in the local lab frame system as simply opening the system to an energy exchange with a different kind of external active environment (the change of energy and charge occurring when the frame is rotated.) We note that the capacitance decreases with the capacitor in the rotated frame, as seen by the lab observer, then increases when the capacitor is snapped back into the lab frame again. Also, although we normally do not consider it, a capacitor (or any other component) actually must "exist" in all possible frames at once, since all those frames are real. Observation is in one sense a means of "selecting the frame from which the observation is made". Once we understand that the frame can be rotated without spatial propagation of the capacitor itself, then the notion of it "sitting there still, but being in a rotated frame" does not appear quite so bizarre after all.

The novel part of this "frame rotation as a means of asymmetrical regauging" effect is that, without violating the laws of physics, Scott produces asymmetry both of the charge in the charged capacitor and stored energy in the charged capacitor. If we assume that the charge he inputs to the capacitor "exists" as a different amount of charge in the rotated frame, then to an observer in the capacitor's rotated frame he is charging the capacitor with the normal amount of charge and the capacitor has the normal amount of capacitance. To the lab observer, of course, he is using less charge (in the lab frame) to fill the capacitor in the rotated frame, and the capacitor thus has "less capacitance". The asymmetry of yanking the capacitor back into the lab frame then produces observable effects (extra charge and extra energy available for dissipation as work in the load), as is to be expected, given the asymmetry occurs.

However, Scott has reported great difficulty with switching, capacitors, etc. but in theory the design should be able to work, at least from the standpoint of relativity, if he can overcome these problems.

When an Overunity Device is Considered *Achieved*

Of course, scientifically one is confirmed as actually achieving an overunity device only after it has been tested and certified overunity by an *independent* and well-qualified test group or agency. That is the normal requirement upon scientific researchers in any field; their results must be *independently* tested and certified. Scott intends to have precisely such independent certification testing accomplished when he can fully overcome his present component problems. We are certainly encouraging him and rooting for him on this project.

Our little group (CTEC, Inc.) does not qualify as a proper independent testing group for the McKie device, since I have been and am involved in the project, having come up with the reverberation and frame rotation explanation of the technical mechanism by which it theoretically works. In fact, I wrote the draft of the Provisional Patent Application which was filed about a year before the formal Patent Application. Scott's invention also uses techniques from both his own former patent and from CTEC's patent pending approaches. So (quite properly) I disqualify myself (and in fact all my CTEC colleagues as well) from being any proper *independent* test group for the device, because we are *not* independent.

In the future, perhaps we will (1) have additional information as to certified test results of the McKie device when the component difficulties are overcome and such tests are accomplished, and (2) be able to post them on the net.

Again we caution the reader that all this is theory until independent certified tests verify it.

Collected Energy Is Recyclable To and From Multiple Collectors

We have all been misled by our professors in the area of "energy conservation." There is only a single master law of energy conservation, and it is this: *Energy can neither be created nor destroyed*. However, *Energy collection upon a collector can be created and destroyed.* Further, I personally add the following corollary: *Energy always exists in dynamic flowing form. Collection of energy upon an interceptor/collector can be in an equilibrium condition and appear static, just as does a fixed whirlpool in a river. But the "water" -- the energy itself -- is always flowing in and out of that collected divergence volume of the whirlpool. And the energy is always flowing in and out of that collection of energy upon any collector, be it static or dynamic.* Actually the notion that a "static" field or potential contains dynamic energy should not be too surprising. In 1903, Whittaker showed that any scalar potential is not a scalar entity at all, but instead is a harmonic bundle of longitudinal EM phase conjugate wavepairs. (Unknown to Whittaker, each such longitudinal EM phase conjugate wavepair comprises a new *net* wave that is a time-polarized EM wave.). At any rate, the "static" potential is a whole set of bidirectional longitudinal EM energy flows.

Then in 1904, Whittaker showed that any EM field pattern (or wave, e.g.) can be decomposed into two scalar potential functions. Since these two scalar potential functions are based on two scalar potentials, then the "static" EM field decomposes into two sets of functions of harmonic sets of bidirectional EM longitudinal EM wavepairs.

So a static EM field or potential is actually a *multivectorial entity*, filled with energy flows in both directions. It therefore should not be surprising that any static potential or field thus contains angular momentum, and indeed that is well-known in more advanced electrodynamics. For example, in 1980 Graham and Lahoz reported measuring the free electromagnetic angular momentum created by quasistatic and independent fields E and B in the vacuum gap of a cylindrical capacitor. Others have done so since then.

Much of the confusion in the energy dynamics field is due to the confusion and failure to differentiate between energy flow, energy transport flow, divergent energy flow component, nondivergent energy flow component, energy collection, energy form, energy collection form, change of energy form, change of energy collection form, etc.

Note: Dr. Bearden is no longer associated with the McKie device.

US Patent # ,146,395

Power Supply Including Two Tank Circuits

Sept. 8, 1992 // US Cl. 363/13

Richard L. McKie

Abstract

The present invention provides a power supply for supplying electrical power to a load. The power supply includes first and second tank circuits having a common resonant frequency, and functions repetitively in two "major periods." In the first major period, the first tank is disconnected from powering the load and the second tank supplies power to the load while charging the first tank. In the second major period, the second tank is disconnected from powering the load, and the first tank supplies power to the load while charging the second tank. The tank circuits are arranged with constant current controllers and switches to function so that the major periods each include first and second minor "intervals." The first minor interval of the first major period defines a time during which the second tank's capacitor is providing power to the load and is charging the first tank circuit; the second minor interval of the first major period defines a time during which the second tank's inductor is charging the first tank circuit and providing power to the load. During the second major period's two minor intervals, the tank circuits perform functions identical to those performed in the first two minor intervals.

References Cited
U.S. Patent Documents
3387201 // 3886429 // 4319315 // 4488214 // 4513226 // 4542440 // 4628284 // 4709323 // 4748311

Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to power supplies for supplying electrical power to a load. More specifically, the invention relates to a high-efficiency power supply including plural tank circuits whose function and interaction are controlled by a set of specially controlled switches and constant current controllers.

2. Related Art

Power supplies including charge storage eIements (or, more broadly, energy storage elements), are known in the art.

For example, U.S. Pat. No. 4,628,284 (Bruning) discloses a high-frequency, high-voltage supply involving switching of transistors for, for example, magnetrons of microwave ovens. A "dead time" is provided between the intervals when one or the other of the transistors is off.

U.S. Pat. No. 4,319,315 (Keeney, Jr. et al) discloses a DC-to-DC convertor with oppositely conducting transistor pairs.

U.S. Pat. No. 3,886,429 (Maillard et al) discloses a symmetrical power pack for adapting to different sources. The power pack provides for alternate blocking and saturation of pairs of switching transistors.

U.S. Pat. No. 4,748,311 (Thomas et al) discloses a chopper circuit having a push-pull frequency f.sub.O and parallel tuned circuit at 2xf.sub.O. A goal of the Thomas et al circuit is to reduce power loss in their switching means.

U.S. Pat. No. 4,542,440 (Chetty et al) discloses a current sensor involving two power switches and two associated snubber circuits which operate 180.degree. with respect to each other.

U.S. Pat. No. 5,513,226 (Josephson) discloses a ballast inverter circuit which comprises two tank circuits. The two tank circuits operate at a common resonant frequency. A pair of transistors are switched in opposition so as to operate in a push-pull manner.

U.S. Pat. No. 4,709,323 (Lien) discloses a parallel resonant converter in which resonant circuitry recovers energy which would otherwise be lost in the circuit's switching operation.

Efficiency of power supplies has been measured in terms of the amount of energy which is consumed internally, within the power supply itself. Of course, it is desirable to minimize the amount of energy which is consumed internally, as energy which is consumed internally cannot be delivered to the load.

There is always a need to provide power supplies having greater efficiency. The present invention fulfills this need.

SUMMARY OF THE INVENTION

The present invention is a power supply for supplying electrical power to a load. The power supply includes first and second tank circuits having a common resonant frequency, and functioning repetitively in two "major periods". In the first major period, the first tank is disconnected from powering the load and the second tank supplies power to the load while charging the first tank. In the second major period, the second tank is disconnected from powering the load, and the first tank supplies power to the load while charging the second tank.

In a particular embodiment, the inventive power supply may include a plurality of constant current controllers, which may be metal oxide semiconductor field effect transistors (MOSFETs), for connecting the tank circuits to the load. The inventive power supply may also include a set of switches for selectively interconnecting the tank circuits, constant current controllers and load.

The tank circuits, constant current controllers and switches are arranged to function in the first and second "major periods", each of which includes first and second "minor intervals". The first

tank circuit comprises a first capacitor and inductor, whereas the second tank circuit comprises a second capacitor and inductor. The first minor interval of the first major period defines a time during which the second capacitor is simultaneously providing current flow through the second inductor, providing power to the load, and charging the first tank circuit; the second minor interval of the first major period defines a time during which the second inductor is simultaneously charging the first tank circuit and providing power to the load. The first minor interval of the second major period defines a time during which the first capacitor simultaneously provides current flow through the first inductor, charges the second tank, and provides power to the load; and the second minor interval of the second major period defines a time during which the first inductor charges the second tank and provides power to the load.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is better understood by reading the following Detailed Description of the Preferred Embodiments with reference to the accompanying drawing figures, in which like reference numerals refer to like elements throughout, and in which:

FIG. 1 is a high-level block diagram schematically indicating an embodiment of the power supply according to the present invention.

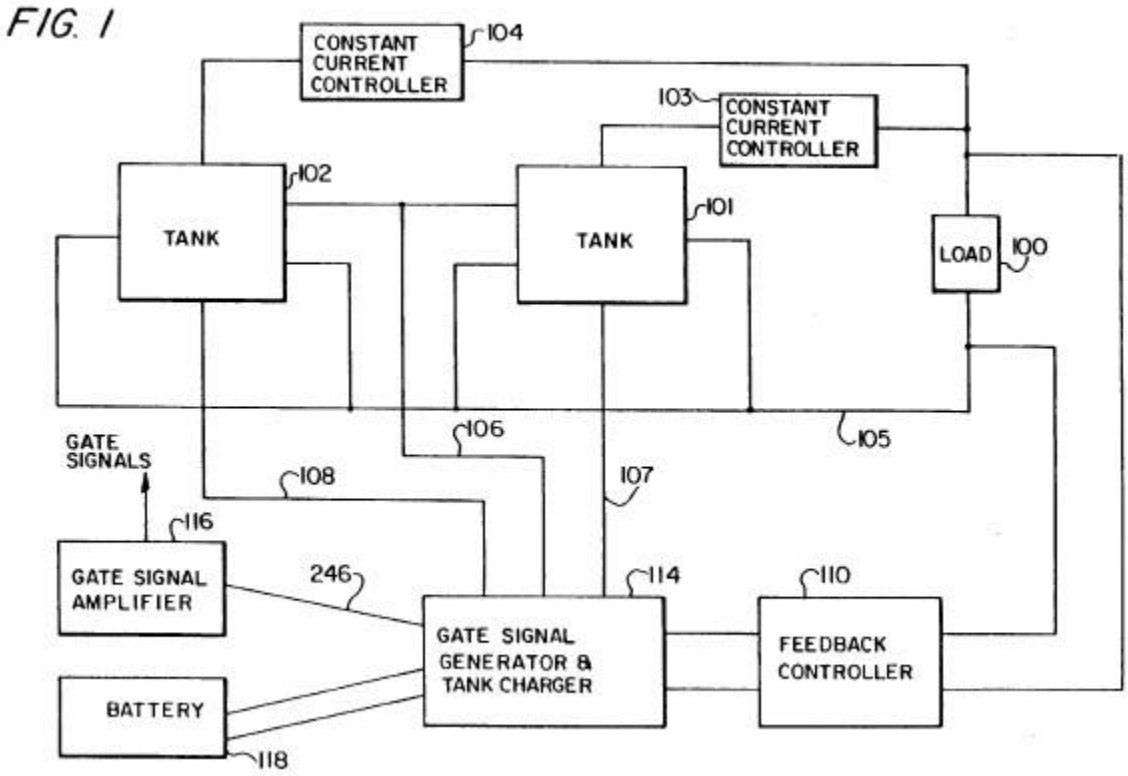


FIG. 2 illustrates in greater detail the embodiment of FIG. 1. **FIGS. 2A and 2B** illustrate current flow during the first and second minor intervals associated with the first major period, as shown

graphically in FIG. 3. FIGS. 2C and 2D illustrate current flow during the third and fourth minor intervals associated with the second major period, as shown graphically in FIG. 3.

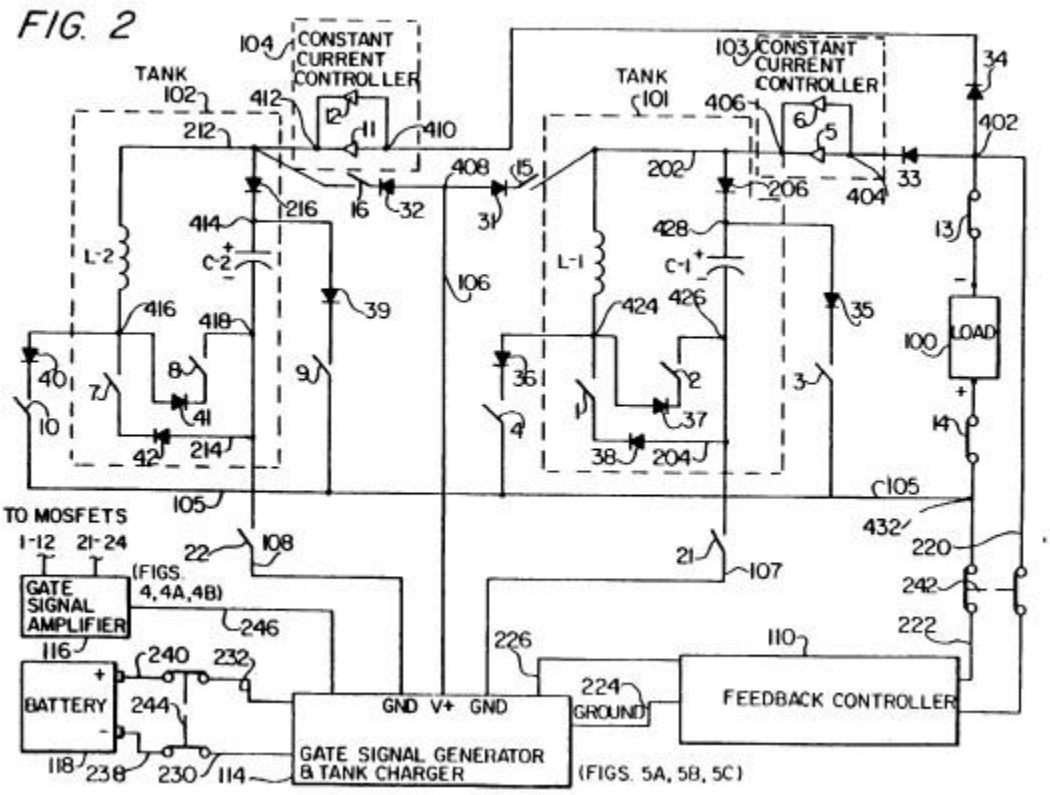


FIG. 2A

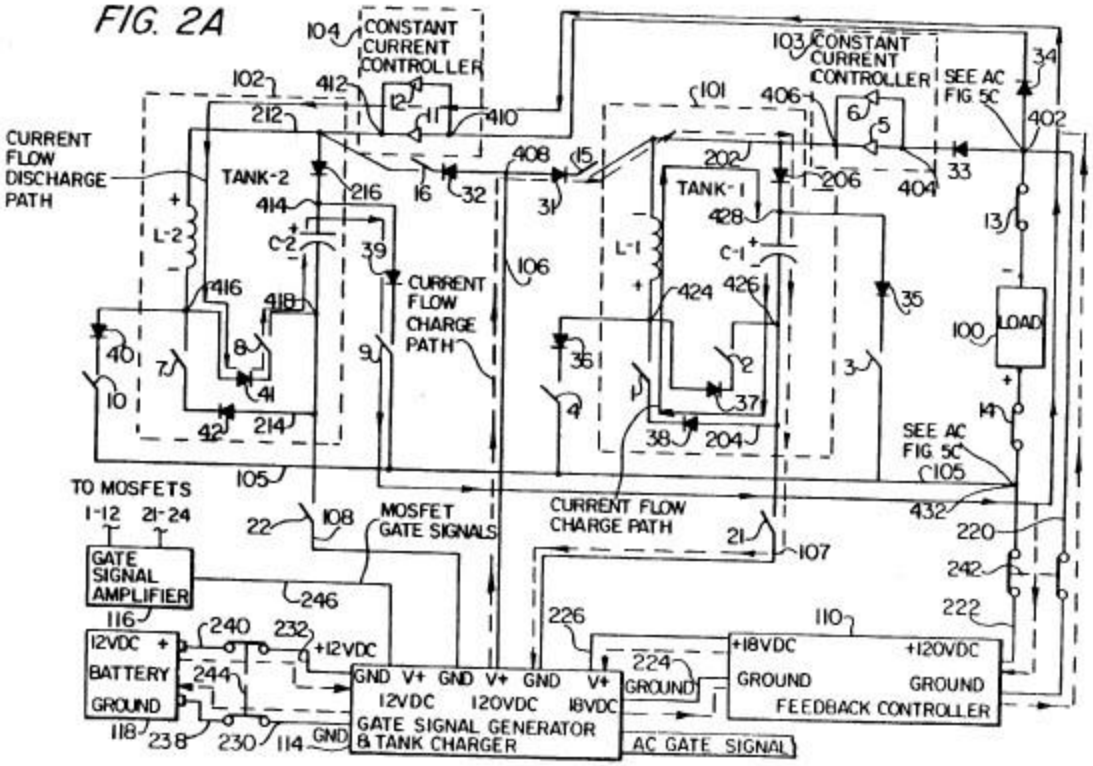
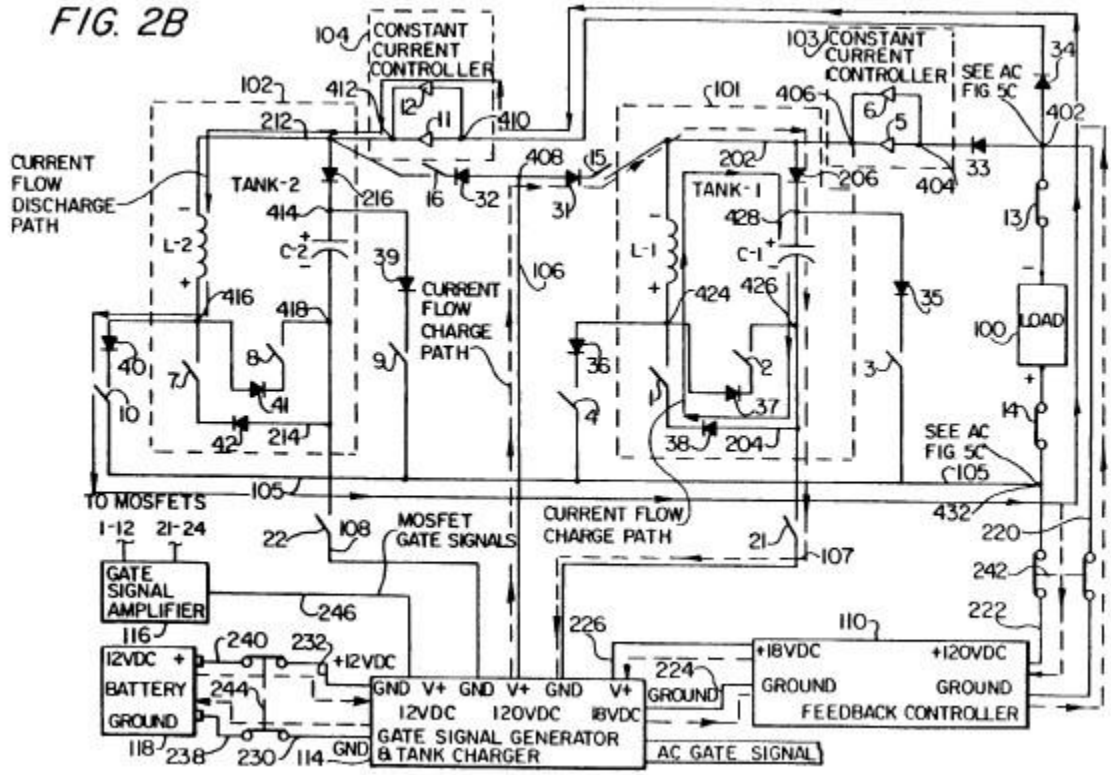

CONSTANT CURRENT CONTROLLER
CONSTANT CURRENT CONTROLLER
SEE AC FIG 5C
CURRENT FLOW DISCHARGE PATH
TANK-2
TANK-1
L-2
L-1
C-2
C-1
CURRENT FLOW CHARGE PATH
LOAD
SEE AC FIG 5C
TO MOSFETS
1-12 21-24
MOSFET GATE SIGNALS
CURRENT FLOW CHARGE PATH
GATE SIGNAL AMPLIFIER
12VDC BATTERY GROUND
+12VDC
GND V+ GND V+ GND V+
12VDC 120VDC 18VDC
GATE SIGNAL GENERATOR & TANK CHARGER
AC GATE SIGNAL
+18VDC +120VDC
GROUND GROUND
FEEDBACK CONTROLLER

FIG. 2B


CONSTANT CURRENT CONTROLLER
CONSTANT CURRENT CONTROLLER
SEE AC FIG 5C
CURRENT FLOW DISCHARGE PATH
TANK-2
TANK-1
L-2
L-1
C-2
C-1
CURRENT FLOW CHARGE PATH
LOAD
SEE AC FIG 5C
TO MOSFETS
1-12 21-24
MOSFET GATE SIGNALS
CURRENT FLOW CHARGE PATH
GATE SIGNAL AMPLIFIER
12VDC BATTERY GROUND
+12VDC
GND V+ GND V+ GND V+
12VDC 120VDC 18VDC
GATE SIGNAL GENERATOR & TANK CHARGER
AC GATE SIGNAL
+18VDC +120VDC
GROUND GROUND
FEEDBACK CONTROLLER

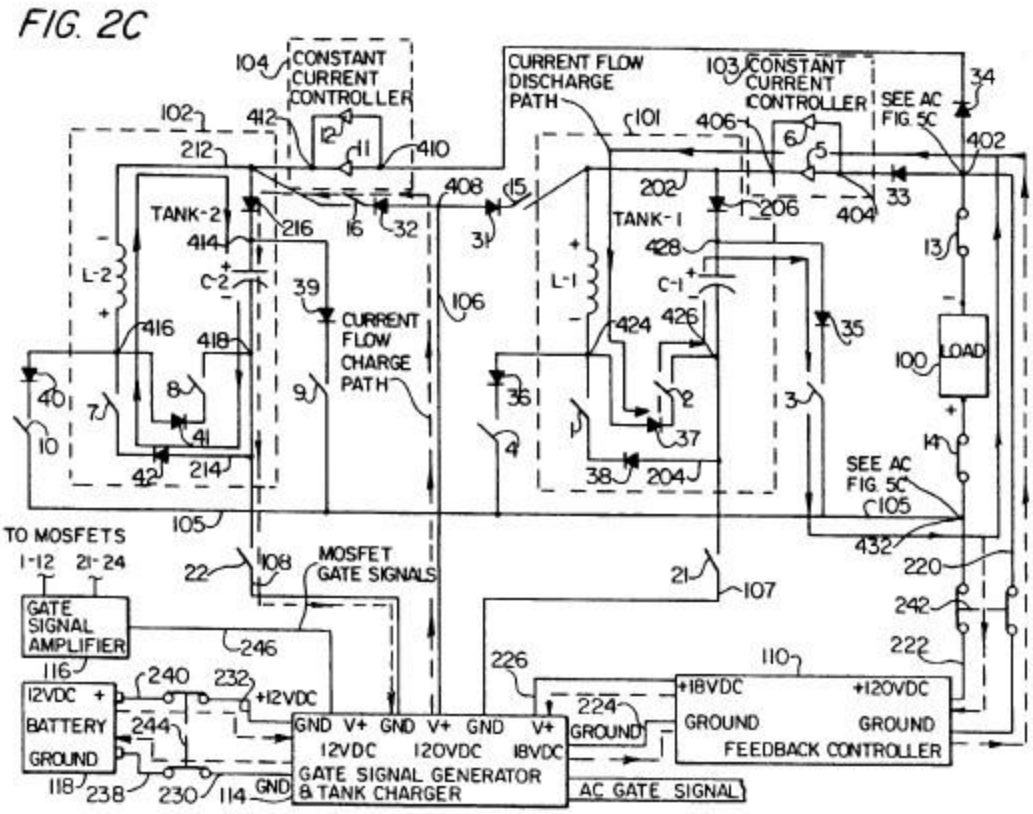


FIG. 3 is a Waveshape and Timing Diagram of certain voltage signals provided by the Gate Signal Generator to the control terminals (gates) of the switches and Constant Current Controllers of the embodiment shown in FIGS. 1 and 2

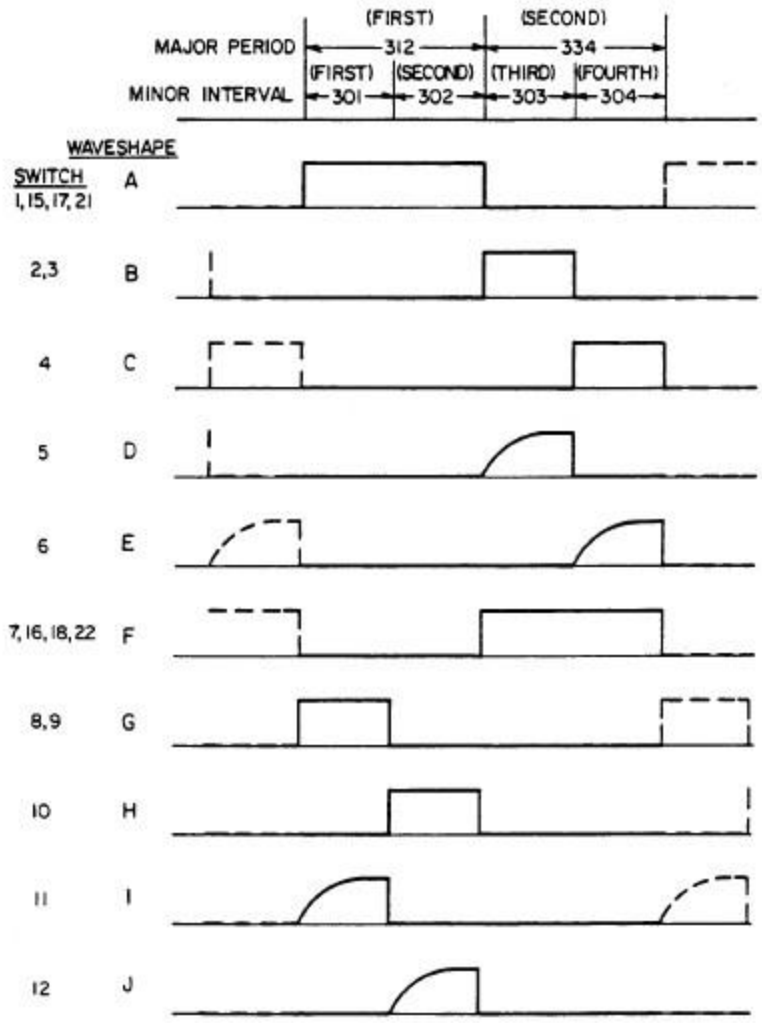


FIG. 3

FIG. 4 illustrates a preferred Gate Signal Amplifier shown in FIGS. 1 and 2, **FIGS. 4A and 4B** showing details thereof.

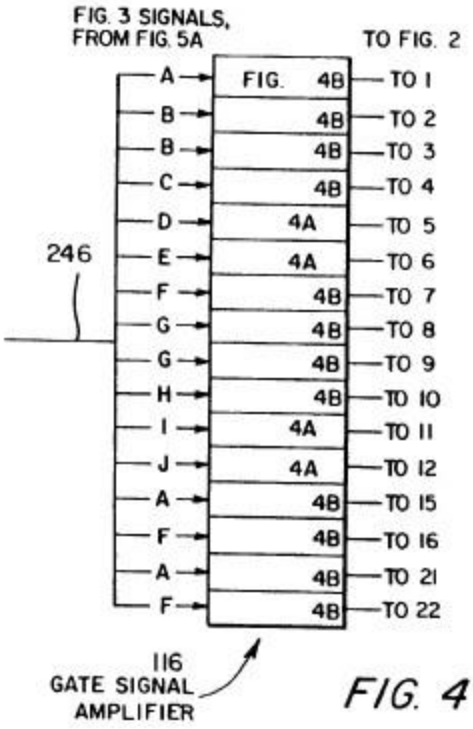


FIG. 4

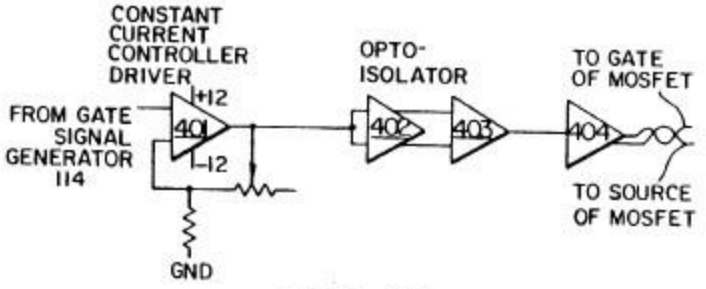


FIG. 4A

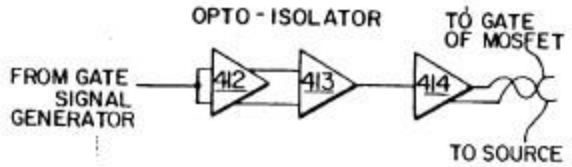


FIG. 4B

FIGS. 5A, 5B and 5C respectively illustrate details of a preferred Gate Signal Generator, Tank Charger, and AC Load Timing Circuit, as shown schematically in FIGS. 1 and 2.

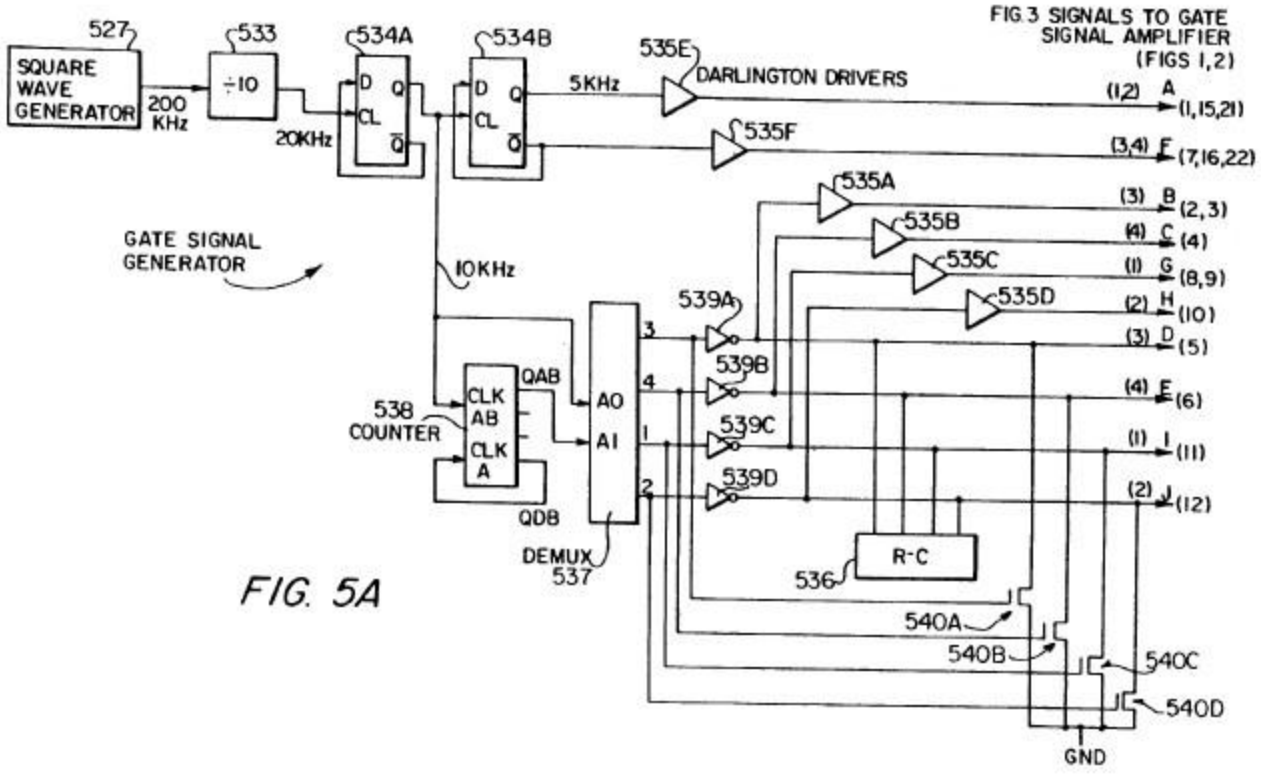
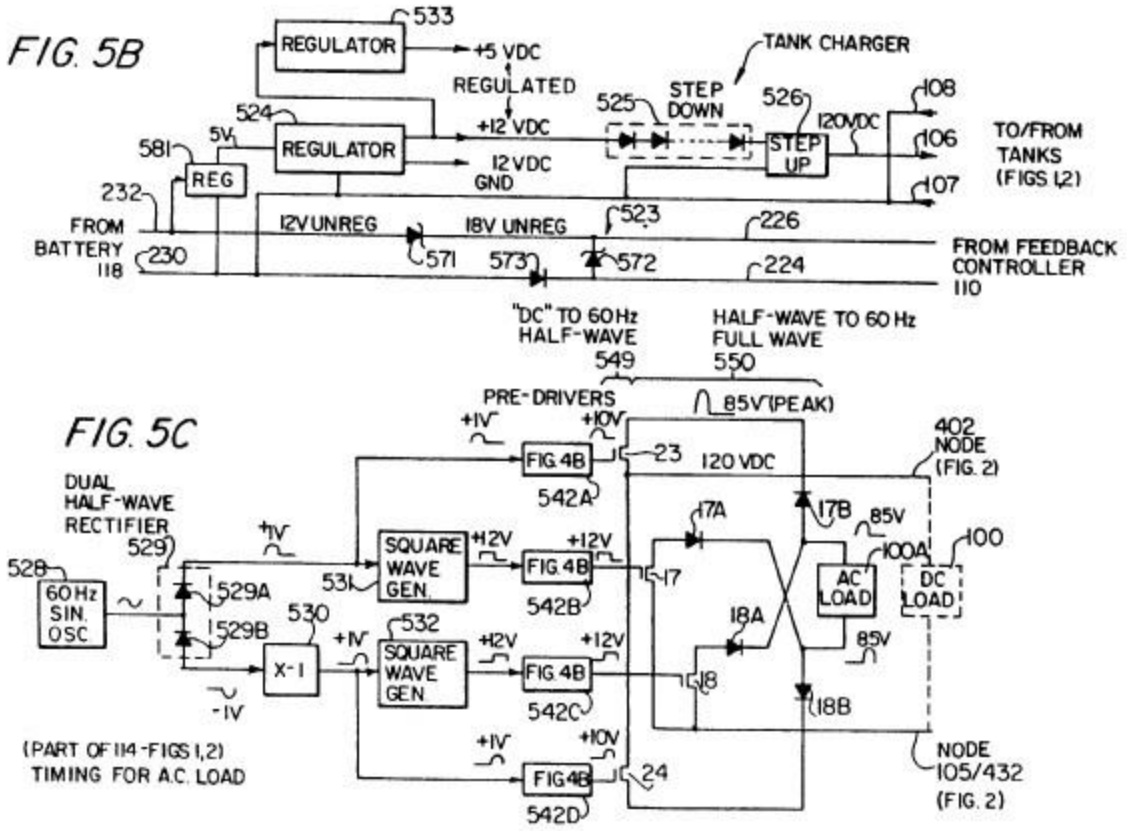


FIG.3 SIGNALS TO GATE SIGNAL AMPLIFIER (FIGS 1,2)
527
SQUARE WAVE GENERATOR
200 KHz
533
÷10
20KHz
534A
534B
D
CL
Q
5KHz
535E
DARLINGTON DRIVERS
535F
(1,2) A (1,15,21)
(3,4) F (7,16,22)
535A
535B
535C
535D
(3) B (2,3)
(4) C (4)
(1) G (8,9)
(2) H (10)
(3) D (5)
(4) E (6)
(1) I (11)
(2) J (12)
GATE SIGNAL GENERATOR
10KHz
539A
539B
539C
539D
538 COUNTER
CLK AB
CLK A
QAB
QDB
A0
A1
DEMUX 537
R-C
536
540A
540B
540C
540D
GND

FIG. 5A



DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In describing preferred embodiments of the present invention illustrated in the drawings, specific terminology is employed to describe preferred elements and circuits for the sake of clarity. However, the invention is not intended to be limited to the specific terminology so selected, and it is to be understood that each specific element and circuit includes all technical equivalents which operate in a similar manner to accomplish a similar purpose. It is further understood that "gate signal generator and tank charger," "gate signal amplifier," "feedback controller," and "constant current controller," are used in the Detailed Description to include all associated circuitry, but that the scope of the invention and the interpretation of claims elements should not be so limited. Also, "node", "path", "pathway" are understood to be any suitable means to conduct electrical current from one circuit element or circuit to another and/or serve as a point where two or more such conductors are connected together. The terms "path" and "pathway" to be broadly interpreted, and may include circuit elements other than conductive nodes. According to convention, positive current flow is described; however, it is understood by those skilled in the art that positive current flow, involving flow of negatively charged electrons in the opposite direction, is but a convention to which operation of the invention is not limited.

FIG. 1 is a high-level block diagram of a preferred embodiment of the power supply according to the present invention. The power supply is designed to provide power to a load 100. FIG. 2 illustrates the power supply embodiment in more detail.

The power supply itself includes first and second tank circuits 101, 102, respectively. The tank circuits 101, 102 are connected to a negative terminal of the load 100 via respective constant current controller circuits 103, 104 and isolating switch 13 (FIG. 2).

A common node 105 connects, via isolating switch 14 (FIG. 2), the positive terminal of the load to both tank circuits 101, 102. Tank circuits 101, 102 are connected via a common node 106 and dedicated paths 107, 108, respectively, to gate signal generator & tank charger 114. The two terminals of the load are connected via respective pathways 220 and 222 to a feedback controller 110 Feedback controller 110 is connected via respective pathways 226, 224 to gate signal generator & tank charger 114. Power is provided to the gate signal generator and tank charger 114 by either a feedback controller 110 (which may be a MOSFET gate drive circuit) or a battery 118. Gate signal generator and tank charger 114 oversees, via gate signal amplifier 116, the functioning of the constant current controller circuits 103, 104, as well as various switches which are not specifically illustrated in FIG. 1.

Various switches and constant current controller elements (which may be MOSFETs), as well as current direction controllers (preferably Schottky diodes), have been purposely omitted from FIG. 1 for the sake of clarity. Referring now to FIG. 2, the power supply of FIG. 1 is illustrated in greater detail.

First tank circuit 101 is shown to comprise a variety of elements extending between two nodes 202, 204. An inductor L1 is connected in series with a node 424, a switch 1 and a diode 38 between nodes 202, 204. Similarly, a diode 206 is connected in series with a node 428, capacitor Cl and node 426 between nodes 202, 204. A diode 37 and a switch 2 are connected in series between node 424 (between inductor L1 and switch 1) and node 426 (between capacitor Cl and node 204).

Second tank circuit 102 is structured in a manner similar to tank circuit 101. Specifically, nodes 212, 214 correspond to nodes 202, 204. Similarly, second inductor L2 and second capacitor C2 respectively correspond to first inductor L1 and first capacitor Cl. Finally, switches 7 and 8, and diodes 42, 41, and 216 respectively correspond to switches 1 and 2, and diodes 38, 37, and 206.

Diodes 206, 216 are oriented so as to allow current to flow from node 202, through respective nodes 428, 414, to respective capacitors Cl, C2. The positive terminals of capacitors Cl and C2 are connected, respectively, through nodes 428, 414, to diodes 206 and 216; the capacitors' negative terminals are connected, respectively, through nodes 426, 418 to nodes 204, 214.

The polarity of inductors L1 and L2 varies with the interval of operation of the circuit. During the first and third minor intervals (described in greater detail below), associated, respectively, with the discharging of tanks 102, 101 through their capacitors and inductors to load 100, the terminal of the inductor which is connected to node 212 (first minor interval 301) or 202 (third minor interval 303) is the positive terminal; during the second and fourth minor intervals (described in greater detail below), this polarity is reversed.

As briefly introduced in the discussion related to FIG. 1, the negative terminal of load 100 is connected through isolating switch 13 to respective tank circuits 101, 102 via respective constant

current controller circuits 103, 104. FIG. 2 illustrates the connection in more detail than FIG. 1. Specifically, the negative terminal of load 100 is connected via node 402 to a diode 33 which in turn is connected to the input node 404 of constant current controller circuit 103. An output node 406 of constant current controller circuit 103 is connected to node 202 (within tank circuit 101). Diode 33 is oriented to allow current to flow from the negative terminal of load 100 through isolation switch 13 and node 402 to the constant current controller circuit 103. Constant current controller circuit 103 includes two parallel-connected constant current controller elements 5 and 6 which may be MOSFETs. Regulation of the current passing through constant current controller elements 5 and 6 is separately controlled by the gate signal generator in 114, described below.

In a manner similar to the connection of isolation switch 13, node 402, diode 33, node 404, constant current controller elements 5 and 6, node 406, and node 202, the negative terminal of load 100 is connected to the second tank circuit 102 via isolation switch 13, node 402, a diode 34, node 410, two parallel-connected constant current controller elements 11, 12 which may be MOSFETs, node 412, and node 212.

The positive terminal of load 100 is connected to two points within each of tank circuits 101, 102. Specifically, the positive terminal of load 100 is connected via isolation switch 14, nodes 105, a switch 3, and a diode 35 to node 428 between diode 206 and capacitor Cl. Also, the positive terminal of load 100 is connected via a switch 14, node 105, a switch 4, and a diode 36 to node 424 between first inductor L1 and switch 1.

In an analogous manner, the positive terminal of load -00 is connected via isolating switch 14, node 105, a switch 9, and a diode 39 to node 414 between diode 216 and capacitor C2. Finally, the positive terminal of load 100 is connected via isolating switch 14, node 105, a switch 10, and a diode 40 to node 416 between second inductor L2 and switch 7.

Node 106, which was shown schematically in FIG. 1 as commonly connected to tank circuits 101, 102, is more specifically illustrated in FIG. 2 to be connected to diodes 31 and 32. Diodes 31, 32 are connected through respective switches 15, 16 to allow current to flow from node 106 to respective nodes 202, 212 within respective tank circuits 101, 102 only when those tanks are being charged. Node 204 (within tank circuit 101) and node 214 (within tank circuit 102) are connected to respective switches 21, 22 on respective pathways 107, 108. The opposite terminals of switches 21, 22 and node 106 are presented to gate signal generator and tank charger 114. Switches 21 and 22 operate in conjunction such that they are not both simultaneously connected to their respective tank circuits 101, 102.

The negative and positive terminals of load 100 are connected via respective paths 220, 222 and switch 242, to feedback controller 110. Feedback controller 110 is connected via paths 224, 226 to the gate signal generator and tank charger 114. Path 224 is considered ground whereas path 226 is a DC voltage, typically +18 volts.

Gate signal generator and tank charger 114 receives its power from either feedback controller 110 or a battery 118 (or other equivalent power source). Typically, the positive DC voltage input 232 of the gate signal generator and tank charger 114 is connected to the positive terminal 240 of battery 118. Similarly, ground input 230 of gate signal generator and tank charger 114 is

typically connected to the negative terminal 238 of battery 118. Switch 244 connects respective battery terminal 238, 240 to gate signal generator and tank charger 114 inputs 230, 232.

In operation, gate signal amplifier 116 performs the function of amplifying the gate signals generated by gate signal generator in 114 and passed to it on paths indicated as 246. Gate signal amplifier 116 distributes the amplified signals to the gates of respective switches and constant current controllers which control the function of the inventive power supply.

Switches 1-4, 7-10 and 21-22 may advantageously be implemented using metal oxide semiconductor field effect transistors (MOSFETs). As illustrated in FIG. 2, switches 3, 4, 9, 10, 21, and 22, may be implemented so that the source of the MOSFET is oriented toward the bottom of FIG. 2, and the drain of the MOSFET oriented toward the top of FIG. 2. For switches 1, 2, 7, and 8, the source of the MOSFET is oriented toward the top o right of FIG. 2 and the drain of the MOSFET is oriented toward the bottom or left. For MOSFET switches 5, 6, 11, and 12, the source is oriented toward the left and the drain is oriented toward the right of FIG. 2. The source of MOSFET 16 is oriented to the left, and the source of MOSFET 15 is oriented to the right.

The gates of the MOSFETs are the controlling elements of the switches, and are provided, via the gate signal amplifier 116, with appropriate voltage signals from gate signal generator in 114. Isolation switches 13, 14 may be advantageously implemented using mechanical, vacuum, or solid state devices suitable for connecting load 100 to, and disconnecting it from, the power supply.

Constant current controller circuits 5, 6, 11, and 12 may also be implemented as MOSFETs. However, these MOSFETs are not operated as binary switches. Rather, as indicated by the generic term "constant current controller," these MOSFETs may advantageously be operated in their linear regions, serving as current controllers. As illustrated in FIG. 2, the source of each constant current controller MOSFET may be connected, via respective nodes 406, 412, to the top node 202, 212 of the tank circuits 101, -02. The drain of each MOSFET may be connected, via respective nodes 404, 410 to the diodes 33, 34. The gate of each MOSFET is connected to the gate signal generator & tank charger 114 via gate signal amplifier 116.

Regenerative feedback controller 110 (FIGS. 1 and 2) is preferably implemented as a Vicor VI L53 Cy DC-to-DC converter, having 120 volts DC on the tank output (load) side, and a +18 volt DC output between paths 226 and 224.

FIG. 3 is a waveshape and timing diagram illustrating signals produced by gate signal generator and tank charger 114 which controls the switches and constant current controller elements 1-12 and 21-22.

As described above, the power supply includes first and second tank circuits. The tank circuits having a common resonant frequency, and function repetitively in two "major periods" 312 and 334 (FIG. 3). In the first major period 312, the first tank 101 is disconnected from powering load 100 and the second tank 102 supplies power to load 100 while charging first tank 101. In the

second major period 334, second tank 102 is disconnected from powering load 100, and first tank 101 supplies power to load 100 while charging second tank 102.

The major periods each include first and second "minor intervals." The first minor interval 301 of first major period 312 defines a time during which the second capacitor C2 is simultaneously providing power to load 100, is maintaining current flow through inductor L2, and is charging first tank circuit 101; the second minor interval 302 of the first major period 312 defines a time during which the second inductor L2 is charging first tank circuit 101 and providing power to load 100. The first minor interval 303 of the second major period 334 defines a time during which the first capacitor Cl simultaneously charges second tank 102, maintains current flow through inductor L1, and provides power to load 100; and the second minor interval 304 of the second major period 334 defines a time during which the first inductor L1 charges second tank 102 and provides power to load 100. The timing of the minor intervals and major periods is controlled by the switches in the following manner.

The first and second minor intervals of the first major period are followed immediately by the first and second minor intervals of the second major period. Consequently, they may be referred to as first, second, third, and fourth consecutive minor intervals. The first through fourth minor intervals are illustrated in FIG. 3 as elements 301, 302, 303, and 304, respectively. It is understood that the waveforms shown in FIG. 3 are repetitive, extending before and after the illustrated time segments. By convention, a high-level signal indicates that a binary switch is "on" (conducting), with a "low" level indicating the binary switch is "off" (non-conducting). The gate signal generator and tank charger 114 generates these waveforms in the illustrated synchrony.

For tank 101, waveform A is input to switches 1, 15, and 21 (FIG. 2) and 17 (FIG. 5C). Waveform B is input to switches 2 and 3. Waveform C is input to switch 4. Waveform D is input to constant current controller element 5. Waveform E is input to constant current controller element 6.

Similarly, for tank 102, waveform F is input to switches 7, 16, 22 (FIG. 2) and 18 (FIG. 5C). Waveform G is input to switches 8 and 9. Waveform H is input to switch 10. Waveform I is input to constant current controller element 11. Finally, waveform J is input to constant current controller element 12.

In the preferred embodiment, waveforms A and F are consecutively timed, positive-going square waves having a 50/50 duty cycle and a nominal frequency of 20 kHz. Waveforms B, C, G, and H are positive-going square waves having a 25/75 (25%) duty cycle at 20 kHz. Waveforms D, E, I, and J, are positive-going exponential waves having a 25/75 (25%) duty cycle at 20 kHz. The illustrated waveshapes are used with a positive voltage power supply. Not shown are the complementary negative waveshapes which could be used with a complementary negative power supply applying the same principles as the illustrated power supply.

Only one of waveforms B, C, G, and H are active in a minor interval. Waveform G is active during the first minor interval; waveform H, during the second minor interval; waveform B, during the third minor interval; and finally, waveform c is active during the fourth minor

interval. Waveforms I, J, D, and E are activated during the first, second, third, and fourth minor intervals, respectively. These waveforms are carefully-controlled analog waveforms, preferably exponential in shape, which regulate the amount of current supplied by respective constant current controller elements 11, 12, 5, and 6, so as to control the current ultimately fed to the load 100 by respective tank circuits -02 and 101. The exponential waveforms may be generated in any suitable fashion, such as using analog networks or digitally implemented waveform generators in a manner known to those skilled in the art.

The flow of current in the circuit of FIG. 2 for start-up operation during the first through fourth minor intervals is now described. The function of the various circuit components is the same as during steady-state operation, described more fully below.

During start-up, switches 13 and 14 are opened, isolating load 100 from the power supply. Switch 244 is closed, providing power from battery 118 (or an equivalent power supply) to the gate signal generator and tank charger -14. Switch 242 is also closed, thus connecting feedback controller 110 to the output of the tanks, which, under steady-state operation, serves load 100 as well as feedback controller 110. The gate signal generator and tank charger 114 is turned on and, simultaneously, switches 1, 8, 9, 11, 15, and 21 are turned on and switches 4, 6, 7, 16, and 22 are turned off. Thus begins the charging of tank 101 during major period 312, minor interval 301 (FIG. 3).

Tank 102 has no charge at this time, consequently, it cannot perform its steady state operation which is to provide power to load 100 and charge tank 101. The switches of tank 102 are, however, connected during startup in the same sequence as they would be during steady-state operation.

Since only tank 101 needs to be charged initially during startup, power only needs to be routed from battery 118 (or equivalent power supply) through gate signal generator and tank charger 114, tank 101, and feedback controller 110, finally returning to the gate signal generator and tank charger 114.

At the end of minor interval 301/beginning of minor interval 302, switches 8, 9, and 11 are turned off and, simultaneously, switches 10 and 12 are turned on. At the end of minor interval 302, major period 312/beginning of minor interval 303, major period 334, switches 1, 10, 12, 15, and 21 are turned off, and, simultaneously, switches 2, 3, 5, 7, 16, and 22 are turned on, during which tank 101 discharges through feedback controller 110 and gate signal generator & tank charger 114 to begin charging tank 102. Finally, at the end of minor interval 303/beginning of minor interval 304, switches 2, 3, and 5 are turned off and, simultaneously, switches 4 and 6 are turned on. At the end of major period 334, both tanks continue in their respective charge/discharge sequence, as indicated in FIG. 3.

During both major periods and all four minor intervals, gate signal generator and tank charger 114, through gate signal amplifier 116, provides the necessary voltage signals to the switches in order to allow them to control the charging and discharging of tanks 101, 102 according to the timing sequence presented in FIG. 3. At the end of major period 312, isolation switches 13 and 14 can be closed, providing power to load 100.

Operation during steady-state conditions will now be described. Special reference is made to FIGS. 2A-2D which respectively illustrate current flow during the four consecutive minor intervals.

During the first minor interval 301, capacitor C2 simultaneously maintains current flow through inductor L2, charges tank circuit 101, and provides power to the load 100. Current passes from the positive terminal of C2 through node 414, diode 39, switch 9, node 105 and switch 14 to the positive terminal of load 100. From the negative terminal of load 100, current passes through node 402, diode 34, node 410, MOSFET 11, and node 412 to re-enter tank circuit 102. Current then passes through inductor L2, node 416, diode 41, MOSFET 8, and node 418 to return to the negative terminal of capacitor C2.

It is understood that, within tank circuit 101, an internal tank current is flowing in a clockwise direction (as viewed in FIG. 2A).

At the same time, tank circuit 101 is being charged. Current flows from gate signal generator and tank charger 114 through node 106, diode 31, switch 15, node 202, diode 206, and node 428 to capacitor Cl. Current continues to flow from the opposite (negative) terminal of C- through node 426, switch 21, along path 107 before returning to the gate signal generator & tank charger 114.

Feedback controller 110 receives some of the current from node 432 through switch 242, along path 222, with current passing along path 226 to gate signal generator & tank charger 114. Current also passes from gate signal generator & tank charger 114 along path 224, through feedback controller 110, along path 220, through switch 242, node 402 and switch 13 to the negative terminal of load 100.

In the second minor interval 302, inductor L2 provides power to load 100 while charging tank circuit 101. Specifically, current passes from conductor L2 through node 416, diode 40, switch 10, node 105 (432), and isolation switch 14 to the positive terminal of load 100. Current then passes from the negative terminal of load 100 through isolation switch 13, node 402, diode 34, node 410, constant current controller MOSFET 12, and node 412 before returning to inductor L2. The description of currents during this second minor interval 302 is otherwise identical to the description of those in the first minor interval 301.

During the third minor interval 303, a process occurs which is a repeat of that in the first minor interval 301, with tank 101 supplying power to load 100, tank 102, and associated circuitry. Capacitor Cl within the first tank circuit 101 now provides power to the load and charges the second tank circuit 102. Specifically, current flows from the positive terminal of capacitor Cl through node 428, diode 35, switch 3, node 105 (432), and isolation switch 14 to the positive terminal of load 100. Current then flows from the negative terminal of load 100 through isolation switch 13, node 402, diode 33, node 404, constant current controller MOSFET 5, nodes 406, 202, inductor L1, node 424, diode 37, switch 2, and node 426 before returning to the negative terminal of capacitor Cl.

Inside tank circuit 102, an internal resonant current flows in a clockwise direction, as viewed in FIG. 2C. Current flows from gate signal generator and tank charger 114 through node 106 (408),

diode 32, switch 16, node 212, diode 216, and node 414 to the positive terminal of capacitor C2. Current also flows from the negative terminal of capacitor C2 through node 418, switch 22, along path 108 before returning to gate signal generator and tank charger 114.

Current flows from node 432 and switch 242 along path 222 to feedback controller 110, and then along path 226 to the gate signal generator and tank charger 114. Current returns along path 224 through the feedback controller 110 through switch 242 along path 220 to node 402.

During the fourth minor interval 304, inductor L1 provides power to the load and charges the second tank circuit 102. Specifically, current flows from the positive terminal of inductor L1 through node 424, diode 36, switch 4, node 105 (432), and isolation switch -4 to the positive terminal of load 100. Then, current flows through isolation switch 13, node 402, diode 33, node 404, constant current controller MOSFET 6, and nodes 406, 202 to return to the negative terminal of inductor L1. Other current flow in the circuit during the fourth minor interval 304 is identical to that described above, with respect to the third minor interval 303.

Appropriate gate control signals are sent from the gate signal generator & tank charger 114, along path 246, to gate signal amplifier 116, and then on to the gates of MOSFETs 1-12, 21, 22, according to the timing and waveshape diagram FIG. 3.

Specific values which have been found advantageous for various components in FIG. 2 are provided in the following Table. However, it is to be understood that substitutions of and variations upon the following components, component values, component types, and parameter ranges may be made by those skilled in the art while still remaining within the spirit and scope of the present invention, as defined by the claims which follow this specification.

TABLE ONE _____ Element Implementation _____ Switches 1-4 IRF350 MOSFETS (400 volt, 60 amp pulsed) Switches 7-10 IRF350 MOSFETS (400 volt, 60 amp pulsed) Switches 21-22 IRF641 MOSFETS (150 volts, 72 amps pulsed) Switches 15-16 IRF350 MOSFETS (See above) Constant current IRF350 MOSFETS (See above) controllers 5-6 Constant current IRF350 MOSFETs (See above) controllers 11-12 Diodes 206, 216 IRF60HFU(R)200 (200 volts, 60 amps-(Super Fast Recovery) Diodes 31, 32 IRF60HFU(R)200 (200 volts, 60 amps-(Super Fast Recovery) Diodes 33, 34 IRF60HFU(R)200 (200 volts, 60 amps-(Super Fast Recovery) Diodes 35-38 IRF60HFU(R)200 (200 volts, 60 amps-(Super Fast Recovery) Diodes 39-42 IRF60HFU(R)200 (200 volts, 60 amps-(Super Fast Recovery) Inductors L1, L2 MICROTRAN SL4-23-F (Toroid/21 .mu.H @ 30 amps) Capacitors C1, C2 COMPONENTS RESEARCH 3.14 uF/600 volts/30 amps @ 200 kHz _____ (IRF = International Rectifier Co.)

Referring now to FIGS. 4, 4A, and 4B, the gate signal amplifier 116 (FIGS. 1 and 2) is illustrated in more detail. In particular, gate signal amplifier 116 is shown to be an array of a plurality of drivers and pre-drivers. Various signals which pass along paths 246 from gate signal generator 114 to the gate signal amplifier 116 (FIGS. 1 and 2) are input to respective drivers/pre-drivers. The details of the generation of the various signals which travel along path 246 are described below, with reference to FIG. 5A.

Referring to FIG. 4, the signals which pass on paths 246 to the gate signal amplifier 116 are shown diverging to respective drivers and pre-drivers. The signals entering from the left of FIG. 4 ar those signals A-J which are illustrated in FIG. 3. Each of the FIG. 3 signals generated in FIG. 5A is input to one of two circuits, the two circuits being respectively illustrated in FIGS. 4A and 4B. The circuits shown in FIGS. 4A and 4B are shown in block form in FIG. 4, for purposes of clarity. Each of the blocks shown in FIG. 4 drives a respective gate of a MOSFET switch or constant current controller shown in FIG. 2.

Signals D, E, I, and J drive constant current controllers 5, 6, 11, and 12, and are analog signals. The circuit shown in FIG. 4A is used for these analog signals. Most of the signals shown exiting to the right of FIG. 4 are binary signals, the binary signals being input to MOSFETs which function as on-off switches. The circuit shown in FIG. 4B is used for these binary signals.

Referring to FIG. 4A, four series-connected elements 401, 402, 403, 404 are illustrated. The first element 401 is a constant current controller MOSFET gate input signal driver which is preferably implemented as an International Rectifier IR2129. The gain and drive characteristics of the driver 401 are determined by fixed and adjustable resistors which are connected and adjusted in accordance with manufacturer's specifications provided in published data sheets.

Driver 401 drives the input of a MOSFET opto-isolator pre-driver comprising elements 402, 403, and 404. Element 402 is preferably a CD40107BEX, and element 403 is preferably an HCPL-2231. Elements 402, 403 effectively provide electrical isolation through use of optical isolation technology. A final MOSFET gate driver 404 is indicated, although it is optional in many embodiments.

It is understood that each of elements 401-404 are provided with regulated power (+12 volts DC and -12 volts DC from FIG. 5B).

Referring now to FIG. 4B, series-connected elements 412, 413, and 414 are illustrated. These elements correspond respectively to elements 402, 403, and 404 (FIG. 4A). Because the circuit in FIG. 4B does not drive a constant current controller MOSFET gate, no element corresponding to FIG. 4A element 401 is required. Otherwise, the function of FIG. 4B is substantially the same as that of FIG. 4A.

Referring now to FIG. 5A, the gate signal generator (part of element 114 in FIGS. 1 and 2) is illustrated. A square wave generator 527 produces a 200 kHz square wave output, nominally 1 volt in magnitude and having a 50/50 duty cycle. The square wave generator 527 may be implemented using a Texas Instruments SN74LS624N voltage controlled oscillator.

The output of square wave generator 527 is received by a frequency divider 533, a divide-by-10 element, which produces a 20 kHz square wave. The implementation of divide-by-10 element 533 is preferably a Motorola MC74HC4017 synchronous counter.

The 20 kHz square wave output by divider 533 is input to the clock input of a first D flip-flop 534A. The non-inverting output of flip-flop 534A is input to the clock input of a second D-flip-flop 534B. The inverted outputs of flip-flops 534A, 534B are fed back to their respective D

inputs. In this configuration, on the rising edge of each clock input, the respective outputs are toggled to the respective opposite states, as determined by the state of the inverted output during the previous cycle of the clock input. In this manner, each of the flip-flops 534A, 534B functions as a divide-by-2 frequency divider. Thus, the output of flip-flop 534A is a 10 kHz square wave, whereas the output of flip-flop 534B is a 5 kHz square wave.

The non-inverted output of flip-flop 534A is input to the CLK AB input of a counter 538, as well as to the less significant address input bit A0 of a demultiplexer 537. The QAB output of counter 538 is input to the more significant address bit Al of demultiplexer 537. Also, the most significant counter bit QDB of counter 538 is fed back to the CLK A input of the counter.

Flip-flops 534A, 534B may be implemented as an RCA 249CD4013AE Dual D flip-flop chip. Demultiplexer 537 may be implemented as a Motorola 832100 M74LS139T 1-of-4 Decoder/Demultiplexer chip. Finally, counter 538 may be implemented as a Motorola Dual 4-Stage Binary Ripple Counter, with a clock AB input being pin 15, the clock A input being pin 1, and the QAB and QDB outputs being pins 13 and 9, respectively.

Demultiplexer 537 has four outputs. Only one of the four outputs is active at the same time. The signals input to address inputs A0 and Al ensure that, at a suitable frequency to synchronize with the outputs of flip-flop 534B, the demultiplexer signal which is active scans progressively from one output of the demultiplexer to the next. The labels 1, 2, 3, and 4 at the output of demultiplexer 537 indicate the minor interval (as defined with reference to FIG. 3) in which the corresponding output is active. The presence of counter 538 ensures that no "lock-up" occurs and that the scanning of the active pulse is continuous and repetitive.

The outputs of flip-flop 534B as well as the outputs of demultiplexer 537 determine the timing for all of MOSFETs 1-12, 15-16, and 21-22 (shown in FIGS. 1 and 2). These signals are labelled A-J at the right of FIG. 5A, and correspond to similarly labelled signals in FIG. 3. Also, the minor interval (1, 2, 3, or 4) during which each signal is active is also labelled, near the right of FIG. 5A.

The manner in which the outputs of flip-flop 534B and demultiplexer 537 determine these control signals is no described. The four outputs of demultiplexer 537 are input to respective logical inverters 539A, 539B, 539C, and 539D, which may be implemented as part of a Motorola MC74HC04N Hex inverter chip. Modified (exponentially shaped) outputs of inverters 539A, 539B, 539C, 539D provide signals D, E, I, J, respectively, which control the gates of constant current controller MOSFETs 5, 6, 11, 12, respectively.

It is understood from previous discussion that the signals D, E, I, and J are not binary signals, but are preferably exponential signals. To provide this exponential wave shaping, a wave shaping element 536, which may be conceptualized as essentially an R-C wave shaper, is employed. In a preferred embodiment, wave shaper 536 may be an RCA CA324E, connected to the outputs of inverters 539A-539D in a manner readily implemented by those skilled in the art using published data sheets for the CA324E.

To provide additional current boosting for the signals D, E, I, and J, the respective outputs of the demultiplexer 537 are input to the gates of four MOSFETs 540A, 540B, 540C, and 540D. The drain-source pathways of these MOSFETs are connected between respective wave shaped outputs of the inverters and ground. MOSFETs 540A, 540B, 540C, 540D are preferably implemented using Siliconix VN10KM N-Channel MOSFETs, rated at 60 volts and 1 amp (pulsed). Thus, the proper shape and power gate signals D, E, I, and J are provided via gate signal amplifier 116 (FIG. 4) to constant current controller MOSFETs 5, 6, 11, and 12.

Meanwhile, the binary MOSFET gate signals A, F, B, C, G, and H are produced by Darlington drivers 535E, 535F, 535A, 535B, 535C, and 535D, respectively. These Darlington drivers, preferably implemented as a Motorola ULN2003A Darlington Transistor Array, receive respective outputs from the non-inverted and inverted outputs of flip-flop 534B, and the respective outputs of inverters 539A, 539B, 539C, and 539D.

All the signals exiting the right of FIG. 5A are sent to the gate signal amplifier 116 offered in detail in FIGS. 4, 4A, and 4B, before controlling the timing and operation of the MOSFETs which are in the tank circuit shown in FIGS. 1 and 2.

It is understood that the circuit elements illustrated in FIG. 5A are provided with proper power in the form of regulated voltage signals. The regulated voltage signals are generated on FIG. 5B.

Referring now to FIG. 5B, voltage regulators and the tank charger considered a part of element 114 (FIGS. 1 and 2) are illustrated. The bottom of FIG. 5B illustrates the connection between battery 118 (at the left of FIG. 5B) and feedback controller 110 (at the right of FIG. 5B). The difference between the unregulated 18 volts received from feedback controller 110 (FIGS. 1 and 2) and the unregulated 12 volts from the battery 118 (FIGS. 1 and 2) is provided by a Zener diode 571, preferably a 5.1 volt Zener used as a voltage shifter. Similarly, a second Zener diode 572 is provided between the positive and ground lines 226, 224, the Zener diode 572 preferably implemented as a 12.1 voltage Zener used as a voltage regulator. Finally, a third diode allows passage of current from battery 118 on path 230 to path 224 to feedback controller 110. The third diode 573 is preferably implemented as a IN914 functioning as a reverse polarity protector.

Regenerative feedback controller 110 (FIGS. 1 and 2) is preferably implemented as a Vicor DC-to-DC converter, having 120 volts DC on the tank output (load) side, and a +18 volt DC output between paths 226 and 224. The Zener diode 572 ensures a 12 volt DC potential matches that from battery 118.

Regulated power is provided as follows. Referring again to FIG. 5B, a first regulator 524 is connected to ground and to the unregulated 12 volt input from battery 118 on path 232, through a voltage regulator 581. Voltage regulator 581 is preferably implemented as a 7805. Regulator 524, preferably implemented as a Maxim MAX743 Dual Output Switch Mode Regulator operating with two Maxim LM78L12 Linear Regulators, produces regulated +12 volt DC and -12 volt DC outputs. The +12 volt DC output is input to a second regulator 533, which is preferably implemented as a 7805 UC8621 5 volt regulator. Regulators 524 and 533 provide the regulated +12 volt DC, +5 volt DC, and -12 volt DC levels to circuits in FIG. 5A, 5C, 4A, and 4B, in a manner readily appreciated by those skilled in the art.

The tank charger portion of element 114 (FIGS. 1 and 2) may be implemented as follows. In FIG. 5B, the tank charger circuitry which controls paths 106, 107, 108 (FIGS. 1 and 2) is shown to comprise a series-connected step down element 525, and a step up element 526. Step down element 525 receives the 12 volt DC regulated power and steps it down through a series of 12 series-connected diodes and an adjustable resistor to provide an output of +5.14 volts DC. Then, step up element 526, preferably implemented as an E1212-1.5150 ERG Inc. DC-to-DC voltage converter, produces a regulated 120 volt DC output. The output of step u element 526 provides power through node 106 (also shown in FIGS. 1 and 2) to both tank elements 101, 102. The ground lines leading to the respective tanks via switches 21 and 22 (FIG. 2) are shown as pathways 107, 108 (FIGS. 1, 2, 5B).

Referring now to FIG. 5C, circuitry which provides timing for an AC load 100A is illustrated. This circuit is in contrast to that providing power to a DC load 100 (shown in FIGS. 1 and 2). The circuit illustrated in FIG. 5C provides a 60 Hz, 120 volt RMS signal to the AC load 100A.

More specifically, a 60 Hz sinusoidal oscillator 528 produces a 1.0 volt 0-to-peak sinusoidal signal. Preferably, the sinusoidal oscillator is implemented as a Micro Linear ML2036 Programmable Sine Wave Generator, programmed to produce the above-mentioned signal applying information in published data sheets accompanying the Micro Linear product. The sinusoidal output of oscillator 528 is input to a dual half-wave rectifier 529. Half-wave rectifier 529 includes two diodes 529A, 529B. The positive portion of the sine wave is passed along a top path to both a square wave generator 531 and a first pre-driver 542A. Conversely, the negative portion of the sine wave is inverted by a unity-gain invertor before being input to a second square wave generator 532 and a fourth pre-driver 542D. Square wave generators 531, 532 are similarly constructed square wave generators which produce +12 volt square waves synchronous with their respective sinusoidal inputs. The outputs of square wave generators 531, 532 are input to second and third pre-drivers 542B, 542C. Pre-drivers 542B, 542C produce +12 volt square waves substantially synchronous with their respective inputs.

The unity-gain invertor is preferably implemented as an LM 318 configured for unity gain but opposite polarity. Square wave generators 531, 532 are readily implemented by those skilled in the art. Finally, pre-drivers 542A, 542B, 542C, and 542D are constructed in accordance with FIG. 4B.

The outputs of pre-drivers 542A and 542D drive gates of respective MOSFETs 23, 24. MOSFETs 23, 24 comprise the elements of a DC to 60 Hz half-wave convertor 549. The node between MOSFETs 23 and 24 is the same as node 402 (FIGS. 1 and 2) which is at the negative side of DC load 100 (illustrated in phantom in FIG. 5C).

MOSFETs 17 and 18, with diodes 17A, 17B, 18A, and 18B collectively comprise a half-wave to full wave converter.

The outputs of pre-drivers 542B and 542C drive gates of respective MOSFETs 17 and 18. The source of MOSFET 17 is connected to the source of MOSFET 24 via series-connected diodes 17A and 18B. The node between diodes 17A and 18B is connected to a first terminal of the AC load 100A. Similarly, the source of MOSFET 18 is connected to the drain of MOSFET 23 via

series-connected diodes 18A and 17B. The node between diodes 18A and 17B is connected to a second terminal of the AC load 100A.

The drain of MOSFET 17 is connected to the drain of MOSFET 18, their common connection being the node 105 (432) which is the node at the positive terminal of the DC load 100 (shown in phantom in FIG. 5C).

MOSFETs 17, 18, 23 and 24 are preferably implemented as IRF350's. Finally, Diodes 17A, 17B, 18A, and 18B are preferably implemented as 200-volt, 30A diodes functioning as reverse polarity protectors.

In operation, the half-wave sinusoidal signals entering the gates of MOSFETs 23 and 24 are 180.degree. out of phase with each other, thus allowing power passing from nodes 402 and 105 to pass through the AC load 100A in oppositely phased time frames. The 85 volt peak voltage half-wave sinusoids provided by each of the MOSFETs 23, 24 arranged in opposite polarities thus provides a 60 Hz full wave 120 volt RMS output to the AC load 100A.

The structure and operation of the preferred embodiment of the present invention has been described. For a more conceptual understanding, the following description is provided.

As described above, the preferred embodiment includes two tank circuits that are resonant at the same frequency. In the illustrated embodiment whose components are listed above, the resonant frequency is 20 kHz. The tank circuits have identical associated drive systems, master-time-controlled by signals A and F (FIG. 3) from gate signal generator and tank charger 114, operating at 20 kHz. Signals A and F are identical but oppositely phased positive-going, 50/50 duty cycle square waves. Each signal controls the time frame by which all other operations take place by controlling the grounding sequence between the tank circuits and their respective current source through respective grounding MOSFETs 21 and 22. Thus, alternation of functioning of the tank circuits is achieved.

Regarding operation of tank 101, at the beginning of the first major period 312, at the beginning of the first minor interval 301; at the instant that MOSFET 21 receives a positive going (0 to +12 volts) 50/50 duty cycle square wave gate voltage signal A , MOSFET 22 is receiving a neutral going (+12 volts to 0 volts) 50/50 duty cycle square wave gate voltage signal F. Tank 101 is thus connected to the gate signal generator and tank charger 114 and capacitor Cl is allowed to charge (under resonant conditions) where the inductive reactance equals the capacitive reactance to V+voltage, which in the preferred embodiment is 120 volts. Page 4-134, Electricity One-Seven, (Harry Mileaf, the totality of which is incorporated herein by reference) includes an explanation of parallel resonant tank circuit charging as generally understood by those skilled in the art.

At the same time that MOSFET 21 receives its positive going square wave gate signal A, MOSFET 1 of tank 101 receives the same gate signal. This opens a current flow path within tank 101 including only resistances associated with the inductor, MOSFET switch, diodes, capacitor and conductors connecting these components in series. The series resistance includes: the resistance of multi-strand wire, which may be #12 copper wire with having 0.00102 ohms resistance/foot used as conductors connecting the various components in series; the 0.15 Ohm

internal drain-to-source resistance of MOSFET 1; the internal resistances of diodes 206 and 38; negligible capacitor resistance; and 12-14 inches of copper wire, which may be #12 single strand wire which makes up the coil of tank 101's inductor L1.

The magnetic core of the inductor is preferably a ferrite toroid with associated magnetic quadrature tuning circuitry. This circuitry between the positive and negative terminals of Cl makes up the complete current charging path within tank 101, which is only about 12-18 inches in length. The extremely low value of the total internal tank circuit resistance allows the tank to be operated at a high "Q" or "quality." Adjustment of the "Q" in the preferred embodiment is accomplished by varying the inductive reactance of the inductor L1. This is preferably accomplished by increasing or decreasing a DC current through the windings around a "C" cored electro-magnet physically placed at 90 degrees (at quadrature) to the axis of the toroid inductor L1. The induced magnetic field within the "C" cored electro-magnet controller changes, or "modulates" the inductive reactance of the inductor L1. Other possible means of manual or automatic physical or electronic adjustment of the tank's inductance lie within the ability of those skilled in the art for tuning the inventive power supply, and need not be further described.

Tank 102's internal charging path circuitry, associated controlling circuitry and associated current paths are functionally, and as close as possible, physically, exact duplicates of those of tank 101.

At the beginning of the first major period, tank 102, having just completed its resonant charging sequence, is at the same instant decoupled from the exterior current source as "grounding" MOSFET 22 receives neutral going (+12 to 0 volt) square wave gate signal F so that it is turned off to a non-conducting state. Also at this same instant, a current flow path is established between the negatively charged terminal of C2, the load 100, and the positive terminal of C2, because of the 0 to +12 volt, 25/75 duty cycle signal G (applied to the gates of MOSFETs 8 and 9), and signal I (applied to the gate of MOSFET 11). MOSFETs 8 and 9 receive the 0 to +12 volt, 25/75 duty cycle gate G signal which turns them on.

MOSFET 11 receives a 0 to +12 volt, 25/75 duty cycle "exponential" gate signal that is specifically designed to utilize the full 25% time period of minor interval 301 in reaching its maximum +12 volt level. It is sequenced to start at the same instant as the gate signal going to MOSFET 8. In the illustrated embodiment, all trailing, or neutral going +12 to 0 volt edges of the exponential signals are vertical; they do not ramp downward nor do they extend below the zero line.

At the end of this first minor interval, the voltages at the gates of MOSFETs 8, 9, and 11 are forced instantaneously to zero volts. This minor interval comprises only half the overall 50 percent duty cycle as determined by the gate signal generator and tank charger 114's 20 kHz rate (signals A and F).

At the instant that MOSFETs 8, 9 and 11 are turned off, MOSFETs 10 and 12 are turned on by receiving 0 to +12 volt 25/75 duty cycle gate voltage signals H and J respectively. MOSFET 10 receives a 0 to +12 volt, 25/75 duty cycle gate voltage like that sent to the gates of MOSFETs 8

and 9. MOSFET 12 receives a 0 to +12 volt, 25/75 duty cycle "exponential" gate voltage signal identical to that sent earlier to the gate of MOSFET 11.

This second set of MOSFET controls the discharging path during the second minor interval 302 (and therefore, the timing of th collapse of the magnetic field of L2) which was created by the discharge of capacitor C2. This second minor interval 302 (occupying the second 50 percent of the first major period time frame) takes up the remaining portion of the discharge time frame. This discharge time frame is the first major period allotted to tank 102 by the 20 kHz signals A and F from the gate signal generator and tank charger 114.

This is the preferred configuration of MOSFETs 8-12 in the discharge current path of tank 102, and the preferred configuration of MOSFETs 21 and 1 in the current capacitor charge path of tank 101. As stated above, MOSFETs 1-4, 7-10, and 21-22 act as "on/off" switches, thus changing the various current flow paths, while other MOSFETs (5, 6, 11, and 12) act as constant current controllers. MOSFET 11 controls the current discharge flow rate of tank 102's capacitor C2, while MOSFET 12 controls the current flow rate created by the controlled collapse of the magnetic field of tank 102's inductor L2. By design, the tank capacitors are not in the current flow discharge path of the tank inductors. When a tank inductor discharges within in the second minor interval, it does not change polarity as in standard tank circuits. Nor do the tank capacitors change in polarity as in standard tank circuits; they charge in one direction only. This action is totally different than that of standard tank circuit.

The advantages of the present invention are many, but include:

1) Each resonant tank is directed to charge its capacitor independent of any exterior load being connected to it, thereby realizing the resonance charging conditions to the fullest.

2) Each tank element is discharged through the load in a uniform manner with a common and unchanging polarity to the load (for DC operation).

A discussion is presented here to amplify the advantages summarized in the previous paragraphs; for it is here that the present invention demonstrates some of its advances in the art.

By first controlling the current flow discharge rate of the resonant tank capacitor, and then controlling the discharge rate of the resonant tank inductor, the following occurs. First, a non-resonant RC circuit, and then a non-resonant LR circuit, powers the load. Powering a load using non-resonant circuits is standard practice today in some power supplies, but any powering circuits are used independently of each other. In contrast, the present embodiment sequentially uses a non-resonant RC circuit and a non-resonant LR circuit. Also, and more important, by discharging the elements of both resonant tank circuits in exactly half the time that was allotted for resonant charging of the individual tank capacitors, twice the available current (and thus, correspondingly increased power) is made available to the load in comparison to the situation in which each capacitor is discharged at its resonant charging rate. In fact, discharging each capacitor at its resonant charging rate would bring about very disastrous conditions for most loads. This is because series resonant conditions would come into play with its associated condition of reactive voltage increases which would be impressed across the load.

By utilizing the MOSFETs 5, 6, 11, and 12 as variable resistors (functioning as constant current controllers) and decreasing their resistance exponentially from maximum to minimum during the "on" portion of the appropriate minor interval, the following is accomplished: By decreasing the internal resistance to current flow within each tank capacitor's discharge circuit over the full minor interval in a manner that exactly counteracts and yet controls the decreasing voltage of the discharging tank capacitor, the load is presented with controlled, even current. Thus, the load can react evenly, as if fed by a constant voltage, constant current source. Similarly, by decreasing the internal resistance within each tank inductor's discharge circuit over the entire minor interval in a manner that exactly counteracts and yet controls the decreasing voltage associated with the collapsing magnetic field, the load is again presented with controlled current.

This advantage is accomplished by exactly matching the previous negative polarity to positive polarity supplied by the tank capacitor (only now from the tank inductor) during the entire time frame in which inductor magnetic field collapse is experienced. The different voltage potentials (+120V and neutral, or ground) required by the load to operate properly is first supplied by the tank 102 capacitor C2 during minor interval 301, then by tank 102 inductor L2 during minor interval 302, then by tank 101 capacitor Cl during minor interval 303, and finally by tank 101 inductor L1 during minor interval 304; at which time minor interval 301 begins again and the entire sequence repeats. Again, it is as if a non-changing, constant voltage source is being applied to the load.

Each of the discharge time "minor intervals" is exactly one-half the full tank charge time "major periods". This fulfills the requirement of balancing the charge/discharge ratio to obtain equilibrium within the circuit As described above, as the tank 102 components C2 and L2 are discharging through the load in a non-resonant manner, tank 101 is charging the capacitor Cl (which is not connected to the load) under parallel resonant conditions. The individual series-connected discharge time rates are one-half the charge time rate, so that the discharge current flow rate is twice as fast, thus affording the load twice the available current compared with a set of operating conditions where each discharge time rate is equal in time to each charge time rate. After the elements of tank 102 have discharged through the load, encountering only series resistive losses due to the conductive paths, the inductor coil, tank diodes, and the load, they are disconnected from the load by MOSFETs 8, 9, 10, 11, and 12 as they receive neutral going +12 to 0 volt signals G, G, H, I, and J, respectively at their gates. At the same instant, the proper positive going gate voltages are applied to the appropriate tank 101 MOSFETs (tank 101 having just completed resonant charging of its capacitor Cl), and the cycle of powering the load during the second major period 334 during minor intervals 303, 304, (from the elements of tank 101) can begin.

In summary, the described embodiment has the following features:

The ability to use reactive power to completely power a load through the process of controlled current flow from alternately employed series non-resonant LR and RC circuits of which the L and C components, during the charging cycle, form a parallel resonant tank circuit.

The ability to utilize the natural magnification characteristics of a resonant tank circuit to bring about the full charge condition of a capacitor through a circuit path other than only through the current's voltage source (as in a series resonant circuit).

The ability to double the effective available current to a load. This is accomplished by halving the available discharge time per element, from the capacitor and then from the inductor of each tank.

The ability to continuously power a pseudo-series-connected load by using two identical resonant tank circuits. One tank circuit's capacitor under resonant conditions is charged from an external voltage source while being isolated from the load. The other previously charged tank circuit's elements discharge (under controlled series circuit conditions as described above) through the load while being isolated from the external voltage source.

The ability to continuously power a load with an electronic power supply that cannot suffer from the problem of voltage drop (a dropping or decreasing voltage potential experienced by known generators).

The ability to continuously power a load with an electrical power source. The external voltage/current source (battery 118) supplies the necessary voltage and current to fulfill the power requirements to charge up Cl in tank 101 during the first major period. After the resonant charging of one of the two resonant tanks, the charged tank elements start to discharge through the load.

As can be seen from the above description of circuit operations, the circuitry operates in both "best mode" cases of resonance. First, regarding series resonance, the illustrated embodiment has the ability to deliver maximum available power to a load. Second, regarding parallel resonance, the illustrated embodiment has the ability to charge a capacitor to act as a voltage potential source utilizing the absolute minimum amount of current from an external current source.

Additional circuitry may be added to the illustrated embodiment to utilize the ability of a DC "power" source to be non-discriminatory in its own power requirements under the condition known as DC superposition. In this scenario, the resonant tank circuitry takes its required current and voltage from whatever source such as battery 118 and/or feedback controller 110, or a combination of both, as long as each has the correct voltage polarity and minimum required current. The system may be specifically designed to utilize feedback controller 110 for the primary (internal) DC voltage and current source, and may use battery 118 as an external DC voltage and current source for the secondary DC source.

The system exhibits maximum impedance to current flow from the point of view of looking out from the resonant tank circuit toward its voltage and current source, as any resonant tank circuit should. At the same time, it powers the load as a series circuit would, with impedance to current flow coming only from line resistance (determined by the size and other properties of the wire used in the discharge path). The system is not under series resonant conditions in the discharge mode because the discharge frequency is twice that of the charge frequency: 40 kHz versus the 20 kHz resonant frequency of the system.

The dual, yet independent series LR and RC discharge circuits making up tanks 101 and 102 have the ability to fulfill all electrical power requirements: each can supply the necessary voltage and current to each other as the internal system "power source", (feedback controller 110, gate signal generator and tank charger 114, gate signal amplifier 116, and associated circuitry) that is charging the other tank circuit (which is charging under resonant conditions at 20 kHz) as a load in parallel to load 100. The reason for this condition is that the particular section of the system being charged under resonant conditions is connected (from a load-power-requirements point of view) to the other part of the power supply that is powering load 100 at that instant. Only those resonant tank circuit components that had been previously charged up under resonant conditions, and were previously disconnected from the "internal" power source (the other tank circuit but not feedback controller 110) during this time frame is powering the total parallel load. In this usage of the term "load", the "internal" tank circuit control circuitry and the other charging tank circuit are a part of the total "load", not just load 100.

Under conditions of resonance, "tunnel diodes", or "Esaki diodes", can be used in the resonant tank circuit, and all necessary outside current directly fed to the tank circuit itself can be eliminated. The reason is that a tunnel diode creates a condition known as "negative resistance". The effect it can have upon the tank circuit in which it is placed is to reduce the effective pure resistance to an absolute minimum. Therefore, with an effective internal pure resistance at an absolute minimum within the tank itself as described above, an absolute minimum "line current" running through node 106 is necessary.

As shown in FIG. 2, two circuits are operating at the same time. In the first minor interval 301 (FIG. 3), tank 101 is being charged, and is disconnected from load 100 and feedback controller 110 as MOSFETs 2, 3, 4, 5, and 6 are not conducting. Tank 101 is connected to the internal power source (feedback controller 110; gate signal generator and tank charger 114; and gate signal amplifier 116) through its diode on the positive 120V node 202 through node 106. MOSFET 21 provides the connection to the ground side.

Tank 102's capacitor and then its inductor discharge through the "load" (which, for these purposes, is considered to include tank 101, the internal power source (feedback controller 110, gate signal generator and tank charger 114, gate signal amplifier 116, and parallel load 100)). At this time, tank 102 is disconnected from the internal power supply (feedback controller 110, gate signal generator and tank charger 114, gate signal amplifier 116) because diode 216 at the positive terminal of capacitor C2 does not allow the capacitor to discharge directly to it. MOSFET 22, positioned between tank 102 and the internal power source ground, has also been turned off, thus isolating tank 102 discharge circuitry from the internal and external power source grounds.

In this manner, each discharging tank circuit component forms both its own ground source and current source to load 100 and its parallel load made up of feedback controller 110, gate signal generator and tank charger 114, gate signal amplifier 116, and the other tank circuit. MOSFETs 11 and 12, each receiving a exponential gate signal, control the amount of current allowed to be delivered to the loads as described earlier for the following reason.

Current should be delivered in a steady, even manner to obtain the desired effect of powering the load evenly. An evenly applied amount of current supplied to a steady and unchanging load will allow the proper, even, designed voltage drop to be developed across the load. The availability of current flow (up to a predetermined maximum amount as determined by the dual tank circuit components and discharge circuitry) applied to a changing load; either resistive, inductive, capacitive, or a combination thereof, can power that load as supplied by the system. Because "current flow" (and not voltage) is the "common denominator" in all four load conditions listed above, the various different voltage drops; and their individual phase relationships at the individual loads can be developed by the various loads as required. The present system utilizes the ability of a power MOSFET to be used as a variable resistor in controlling the current flow rate. The present system controls the current flow rate supplied to the load by decreasing its resistance to current flow in a manner that is an exact correlation to the dropping source voltage being supplied first by tank capacitors and then tank inductors. This arrangement delivers the correct flow of current needed to pass through and as required by the load. As the voltage of, first, the tank capacitor and then the tank inductor, drops, the controlling MOSFETs' internal resistance also must drop.

During the first minor interval 301 (FIG. 3) the discharging of the tank 102 capacitor C2 supplies the necessary difference of potential between its terminals to cause current flow through the parallel loads, as controlled by MOSFET 11.

During the second minor interval 302 (FIG. 3) the collapsing magnetic field of the tank 102 inductor L2 supplies the necessary difference in potential between its poles to cause current flow through the load, as controlled by MOSFET 12.

During minor intervals 303 and 304 (FIG. 3), the above described current flow occurs again. Tank 101 powers the "load" (which now includes both tank 102 and the internal power source as described previously). Tank 101 capacitor Cl is disconnected from gate signal generator and tank charger 114 through node 106 by diode 206 at C1's positive terminal, thus not allowing Cl to discharge back into itself, MOSFET 15 being turned off, and by the non-conducting ground controlling MOSFET 21 being turned off. MOSFET controls the discharge time of capacitor Cl, in the same manner as MOSFET 11 controls the discharge time of capacitor C2. MOSFET 6 controls the decay time of the magnetic field of inductor Ll, in the same manner as MOSFET 12 controls the decay time of the magnetic field of inductor L2. MOSFETs 8, 9, and 10 are turned off to allow tank 102 to charge capacitor C2 to the applied 120 volts supplied from the gate signal generator and tank charger 114.

Modifications and variations of the above-described embodiments of the present invention are possible, as appreciated by those skilled in the art in light of the above descriptions. It is therefore to be understood that, within the scope of the appended claims and their equivalents, the invention may be practiced otherwise than as specifically described.

David McCLINTOCK

Air Engine

http://fuel-efficient-vehicles.org/FEV-energy-suppression-CBird.php

Energy Suppression
An Invisible Galaxy of Inventions

by

Christopher Bird

David McClintock created a free energy device known as the McClintock Air Motor (U.S. Patent No. 2,982,261) which is a cross between a diesel engine with three cylinders and a compression ratio of 27-to-1, and a rotary engine with solar and plenary gears. It burns no fuel, but becomes self-running by driving its own air compressor.

[There are over 380 Google references to this paragraph. No additional information is available]

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http://www.geocities.com/Area51/Shadowlands/6583/project119.html

Free Energy Technology
by
Robert E. McElwaine

A fourth type of Free Energy Device is the 'McClintock Air Motor' (U.S. Patent #2,982,261), which is a cross between a diesel engine (it has three cylinders with a compression ratio of 27 to 1) and a rotary engine (with solar and planetary gears). It burns NO FUEL, but becomes self-running by driving its own air compressor. This engine also generates a lot of heat, which could be used to heat buildings; and its very HIGH TORQUE makes it ideal for large trucks, preventing their slowing down when climbing hills. [David McClintock is also the REAL original Inventor of the automatic transmission, differential, and 4-wheel drive.]

US2982261
Air Engine

1961-05-02
Cleo L. McCLINTOCK
Classification: - international: F01L35/00; F01L35/00 - European: F01L35/00

Description

This invention relates to improvements in engines and more particularly to an engine operated by fluid presssure and the expansion forces thereof at operating temperatures of the engine.

The objects and advantages of the invention will become apparent as the description proceeds and the invention consists essentially in the novel combination and arrangement of parts hereinafter described in detail and illustrated in the accompanying drawings.

In the accompanying drawings:

Figure 1 is a side view of an engine made in accordance with my invnetion and with fragmetns broken away and some parts in section for convenience of illustration.

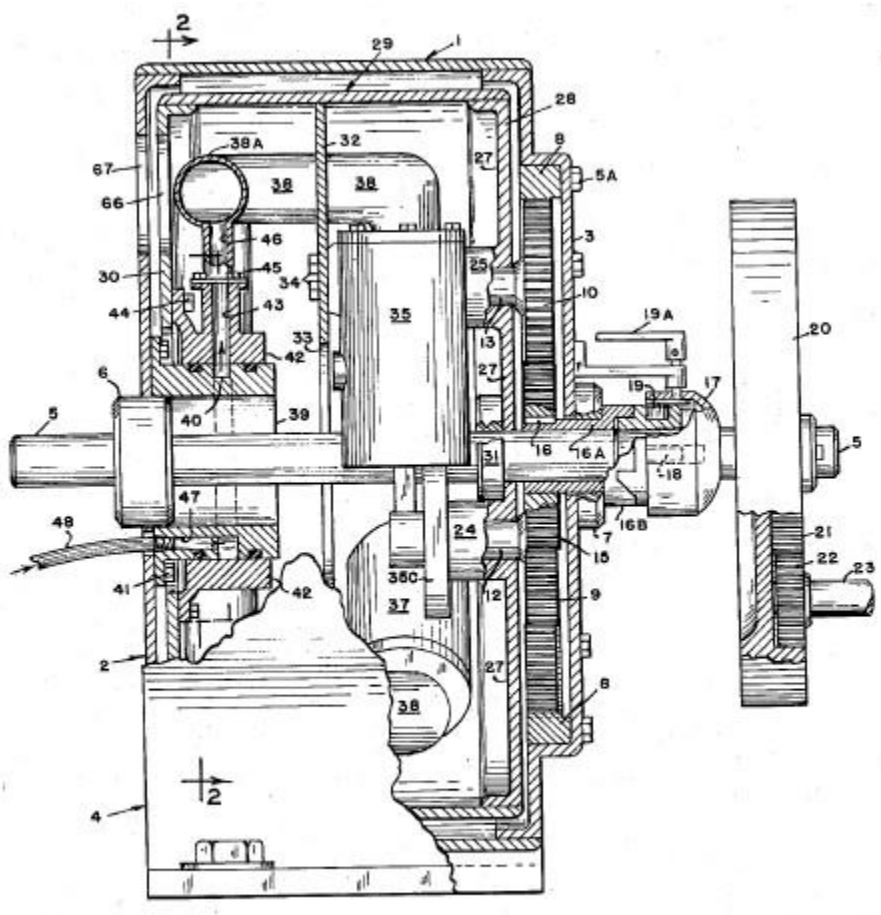


FIG.1

Figure 2 is a sectional end view taken approximately along the line 2-2 of Figure 1.

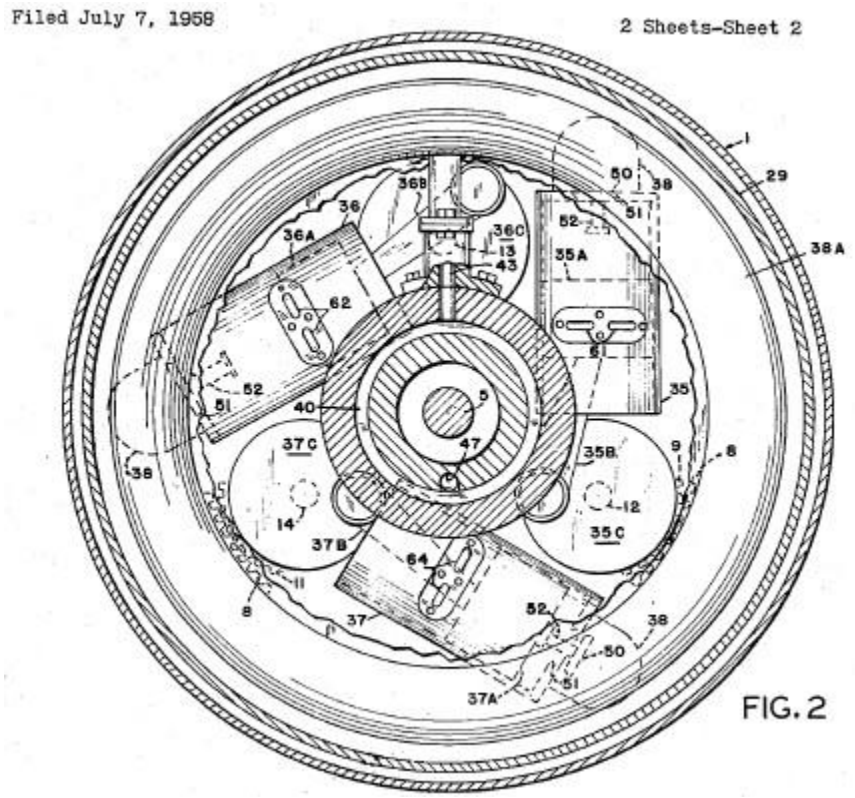
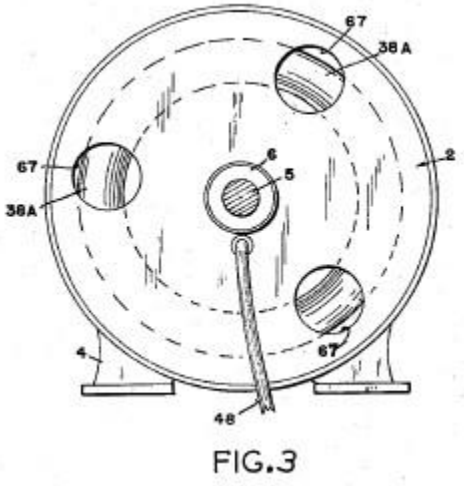


Figure 3 is a view on a reduced scale of the left end of Figure 1.



Referring now more particularly to the drawings:

In the preferred embodiment of the features of my invention as here shown, reference numeral 1 indicates a stationary cylindrical housing closed at both ends by end walls 2 adn 3 and provided with suitable supporting legs indicated generally at 4. An engine shaft 5 extends entirely through

the housing 1 and is journalled in anti-friction bearings 6 and 7 secured to the end walls 2 and 3 respectively. The planet gears are enmeshed at all times with a sun gear 15 keyed or otherwise secured as at 16 to the inner end of a sleeve 16A freely rotatable about the engine shaft 5. The opposite or outer end of the sleeve terminates in a clutch element 16B cooperating with a manually disengageable companion clutch element 16B by any approved type of actuating mechnaism such as the rollers 19 and handle 19A. The outer end of the engine shaft is provided with an internal ring gear 21 meshing at all times with a driving gear 22 secured to one end of a shaft 23 of a starting motor (not shown).

The shafts 12, 13 and 14 of the planet gears are rotatably mounted in bearings respectively 24, 25 and 26, formed in a carrier 27 in the form of a disc which provides one end wall 28 of a cylindrical housing 29 disposed within the main housing 1 closed by an opposing end wall 30 and freely rotatable about the engine shaft 5 by means of anti-friction bearings 31.

An intermediate wall 32 is secured within the cylindrical housing 29 and is provided with a central concentric opening 33. Securely mounted as at 34 to the wall 32 are three motor cylinders 35, 36 and 37, each provided, respectively, with pistons 35A, 36 and 37, each provided, respectively, with pistons 35A, 36A and 37A operatively mounted therein. The pistons are connected by their pitmans 35B, 36B and 37B to crank discs 35C, 36C and 37C. The crank discs are secured to or formed integral with the shafts 12, 13 adn 14, respectively, of the planet gears 9, 10, and 11.

The head of each cylinder is provided with a conduit 38 extending through the wall 32 and in open communication with an annular tubular pressure manifold 38A. A hub 39 having a circumferential groove 40 therein is secured as at 41 to the housing wall 2 and partially supports the bearing 6. A ring 42, ported as at 43, is secured as at 44 to and rotatable with the wall 30 of the rotatable housing 29. The port 43 is connected as at 45 to and in communication with the manifold 38A by means of a duct 46. The bottom of the ring 42 is ported as at 47 and thereby in communication by means of a pressure line 48 with a source of fluid pressure (not shown).

The head of each cylinder 35, 36 adn 37 is provided with a centrally disposed poppet valve 50 seated as at 51 and provided with a stem 52 extending downwardly into its respective cylinder whereby each valve will be intermittently opened by contact with the top of its respective piston as the piston nears the completion of its up-stroke.

With the parts in their positions shown in Figure 2, the piston 37A of cylinder 37 is starting its downward or power stroke; piston 36A in cylinder 36 is substantially midway of its power stroke; piston 35A in cylinder 35 is substantially midway of its power stroke. Pressure from the main manifold 38A through the conduits 38 is fed progressively and automatically to the cylinders 35, 36 and 37 by the opening of their intake valves 50. Since the cylinders and their respective pistons and valves are identical, as is also their operation, a description of one will suffice for all. For example, and with particular reference to cylinder 37 it will be seen that as piston 37A (assuming it is now arriving at the top of its stroke) strikes the valve stem 52, the valve 50 will be lifted from its seat to admit into the cylinder a full charge of pressure from the conduit 38. As the piston starts its downward stroke, the valve 50 will close, allowing the piston

to complete its power stroke, at the end of which the residual pressure will exhaust through the ports 64.

In the end wall 30 of the internal cylindrical rotatable housing 29 I provide one or more exhaust openings 66 open to the atmosphere through one or more openings 67 formed in the end wall 2 of the stationary main housing 1.

From the foregoing it will be apparent that actual transmission of power by air from the main manifold to the motor cylinders at high velocity and with very slight loss by friction and the magnitude of forces created by the lever advantages between the pistons of the motor cylinders, planet gears, planet carrier, sun gear, and engine shaft are simple and effective and that since air devolops heat on compression, the resultant expansion forces of the air within the motor cylinders will augment the power output generated by their mechanical operation.

While I have shown a particular form of embodiment of my invention, I am aware that many minor changes therein will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention. having thus described my invention, I claim ... [Claims not included here]

Michel MEYER

NMR Amplifier Generator

30x Amplification of input energy by a simple circuit employing nuclear magnetic resonance of copper;
likewise with "Isotopic Mutation" of iron;
1 Article (in French), 2 French patents, 1 Czech patent.

"Science et Vie" **nr.700 March 1976 (pages 42-45), by Renaud de la Taille.**

UNE CENTRALE ÉLECTRIQUE CHEZ SOI

Alors que des expériences synergétiques sont réalisées dans plusieurs laboratoires, un autre inventeur, Michel Meyer, est venu nous apporter un générateur d'énergie d'un principe différent, mais tout aussi intéressant. Voici donc en chantier deux outils qui pourraient apporter une révolution scientifique immense : l'indépendance énergétique.

Cela fait maintenant plus de 50 ans que les physiciens ont découvert la loi d'équivalence entre la matière et l'énergie : une longue marche faite de travaux ardus et de chercheurs brillants pour aboutir à la célèbre équation d'Albert Einstein. De ce jour, on connut qu'il est possible de tirer des milliers de kWh à partir de n'importe quel caillou, et les travaux pratiques commencèrent. Il fallut la guerre pour leur donner le bel essor qui menait à libérer d'un seul coup l'énergie d'un bout d'uranium : la bombe A prouva à l'évidence la justesse de l'équation $W = mc^2$. Après la première bombe vint la seconde, puis la troisième et la suite en un vaste déploiement d'explosions. La civilisation n'y gagna pas beaucoup.

Car pour lui être profitable, l'énergie aurait dû être tirée lentement de la matière. Mais, apparemment, les chercheurs ne savaient guère faire que des pétards et il fallut des années bien longues pour mettre tout doucement au point des centrales nucléaires très grandes, très lourdes, très coûteuses et très dangereuses.

Et puisque la recherche officielle reste confinée aux bombes et aux centrales, il fallait bien que quelques individus poursuivent de leur côté les travaux capables de mener au générateur individuel. Il y eut bien des échecs, bien des enthousiasmes subitement douchés ; ici même nous recevons régulièrement des théories à priori séduisantes, mais qui s'avèrent contradictoires après examen. Celles qui ne le sont pas sont très rares : jusqu'ici, seule la synergétique du Pr. Vallée entre dans ce cas. Nous recevons aussi des descriptions de montage, des processus d'expérience ; la plupart du temps on peut déceler l'erreur dès le dessin.

Cela pour dire que nous ne présentons ici que les hypothèses cohérentes qui nous sont apportées, ou les expériences directement reproductibles. Et c'est une expérience de genre que nous allons rapporter aujourd'hui, laquelle est à la fois étonnante, et facile à reproduire par tout ingénieur disposant d'un certain matériel électrique. Elle est l'œuvre d'un jeune alsacien, Michel Meyer, étudiant en sciences dont les recherches sont orientées actuellement vers la théorie des champs électriques. Dans ses travaux, il s'appuie d'ailleurs sur les résultats de la mécanique ondulatoire et de la mécanique quantique.

L'idée de base est assez simple et repose sur la conception actuelle du courant électrique : celui-ci n'est en fait qu'un transfert d'électrons qui passent d'un atome à l'autre sous l'action d'un champ électrique. D'une manière encore plus générale, tout mouvement de charges est un courant ; dans les métaux, le cas est celui des courants de conduction où un mouvement de charges négatives, les électrons, est déclenché par la présence d'un champ. Mais, dès qu'il y a déplacement de particules chargées, il y a courant électrique. Comme la matière est faite d'atomes, eux-mêmes constitués d'un noyau positif entouré d'électrons négatifs, elle constitue un immense réservoir de charges.

Tout le problème consiste à les mettre en mouvement car, en principe, les électrons sont en équilibre autour du noyau et il faut un apport d'énergie pour les envoyer se promener en grand nombre et dans le même sens. Cet apport d'énergie peut être la variation d'un champ magnétique — processus mis en œuvre dans les alternateurs, les dynamos, les transformateurs, etc. — une réaction chimique — piles et accumulateurs — un rayon lumineux — cellules photo-électriques — et ainsi de suite. Mais cette énergie est toujours apportée de l'extérieur, ce qui est peu naturel si l'on considère que la matière renferme une énergie considérable.

Le générateur le plus intéressant n'est donc ni la dynamo, ni la cellule photo-électrique, ni la pile, même si elle est atomique, mais l'engin qui saurait tirer directement sous forme électrique l'énergie contenue dans un métal. C'est là qu'intervient le schéma atomique de la mécanique ondulatoire, schéma mis à contribution par Michel Meyer. Le dessin habituel un peu simpliste fait de l'atome un petit système planétaire, avec un gros noyau central et des électrons sur des orbites bien précises.

Les conceptions actuelles de la physique s'écartent sensiblement de cette belle simplicité en devenant plus statistiques que déterministes. On ne parle plus d'orbite pour les électrons, mais d'orbitale, zone sphérique entourant le noyau où il est seulement probable de trouver l'électron en un point déterminé. L'atome tout entier est d'ailleurs considéré comme un système oscillant, toute particule étant liée à une onde et réciproquement. Nous ne pouvons aller plus loin ici, une description plus précise réclamant des connaissances de mécanique ondulatoire et de mécanique quantique d'un niveau élevé.

Nous retiendrons seulement, pour comprendre l'invention de Meyer, que tout atome est un système oscillant dont la fréquence peut être connue avec précision. L'idée de base du générateur électrique repose sur l'utilisation d'une fréquence de résonance faisant, par altération du champ de liaison électron-noyau, diverger l'orbitale désirée. Par diverger, il faut entendre que le rayon de cette orbite tend à croître indéfiniment, ce qui revient à dire que l'électron quitte le novau. Pourquoi une fréquence de résonance ? Parce qu'il est connu depuis fort longtemps qu'en apportant à un système oscillant une énergie ondulant au même rythme, on amplifie ce mouvement aussi loin qu'on veut, et en général jusqu'à la rupture. Le cas est resté célèbre du pont qui s'est effondré parce que des soldats l'avaient traversé au pas cadencé. Tout comme un verre de cristal se brise au moment où le ténor lance son ut de poitrine.

Ainsi, tout système vibrant peut être mis en oscillation forcée jusqu'à la rupture : il suffit de lui apporter un peu d'énergie sur sa propre fréquence. Puisque l'atome est un système oscillant, on conçoit qu'il soit possible de décrocher l'électron par résonance. La difficulté venait des fréquences extrêmement élevées qui sont associées aux électrons : elles se comptent en milliards d'oscillations par seconde, ce qui est très largement supérieur à ce que l'on sait produire. Heureusement, le phénomène de résonance prend naissance non seulement avec la fréquence propre de l'oscillateur, mais avec toute fréquence qui en est multiple ou sous-multiple entier. Autrement dit, si un diapason standard donne le la^3 à 440 périodes par seconde, on le met en résonance à la fréquence 440 Hz, et aussi bien à 880 qu'à 220 ou 110 — ce qu'on appelle les harmoniques d'une fréquence fondamentale.

Pour l'atome, la fréquence issue des équations quantiques et ondulatoires est donnée par l expression

$$f = 2\,\varepsilon_0\, r_0\, m_0\, c^2/c^2 \sqrt{8\, c\, \varepsilon_0\, h^3/m_0\, e^4}$$

où r_0 est le rayon de l'orbitale choisie, m_0 la masse de l'électron, c la vitesse de la lumière, ε_0 la permittivité du vide, e la charge de l'électron et h la constante de Planck. En prenant le cuivre comme métal et son orbitale de conduction pour r_0, on trouve une harmonique commode pour la fréquence de résonance à 172 753,867 Hz. En pratique, elle est appliquée à une bobine pour donner un champ magnétique de même fréquence. Le métal choisi, le cuivre en l'occurrence, est plongé dans ce champ d'induction alternatif et, par résonance, les atomes de métal sont transformés en émetteurs d'électrons.

Il y a donc création d'un courant, ce qui à première vue n'a rien de très original. Ce qui est plus intéressant, c'est que le courant produit dans le cuivre est très supérieur au courant nécessaire pour entretenir la fréquence de résonance. Dans les meilleures conditions de montage, M. Meyer est arrivé à un facteur multiplicatif de 30 à 40 : pour 1 W de puissance consommée à entretenir la fréquence, il récoltait à la sortie de 30 à 40 W directement utilisables. En vertu du principe de conservation de l'énergie, il en résulte que le système se comporte comme un convertisseur qui puise son énergie au sein même de la matière : l'énergie de liaison noyau-électron est convertie en courant électrique. C'est donc bien un générateur de puissance autonome.

Sous ses deux aspects, théorique et pratique, l'appareil mis au point par Meyer n'offre pas de difficultés majeures. Pour la technologie, des oscillateurs capables d'atteindre les centaines de kHz existent. Ceux qui ont servi aux premières expériences ont d'ailleurs été montés par l'inventeur lui-même selon la schéma habituel des circuits oscillants : les composants, selfs, capacités, transistors, se trouvent dans le commerce. L'inconvénient de ces circuits réside plutôt dans leur manque de stabilité de la fréquence. Or, il faut être très exactement à l'harmonique voulue, ce qui représente neuf chiffres significatifs exacts ; c'est une précision considérable. L'alimentation ne présente, elle, aucun problème : de 6 à 15 V avec quelques dixièmes d'ampères ; c'est la puissance de quelques piles

rondes ordinaires. Quant au courant débité, il est fonction de la résistance du circuit d'utilisation : si cette résistance diminue, l'ampérage augmente alors que la tension reste à peu près constante. Des premiers essais, il résulte que la limite dans cette voie reste l'échauffement du métal servant de générateur.

Pour ce qui est de la question théorique, nous ne pouvons que laisser aux spécialistes le soin de débattre avec M. Meyer la validité des hypothèses avancées. Notons toutefois que celles-ci découlent des équations les plus sûres de la mécanique ondulatoire ou quantique et ne remettent pas en cause les considérations actuelles de la physique. Par rapport à l'énergie intrinsèque du noyau atomique, le rendement de l'appareil est de 10^{-7}, soit 0,00001 %. C'est peu, sans doute, mais l'énergie renfermée dans un seul gramme de matière est si colossale que le très faible rendement correspond encore à nos besoins d'énergie au niveau individuel.

Il existe d'ailleurs des limites propres à ce dispositif ; des limites de stabilité nucléaire, d'abord, car on ne peut pomper toute l'énergie d'un noyau sans le détruire, ou du moins en compromettre gravement l'équilibre interne. Ensuite des limites d'ordre pratique, un générateur de ce type étant borné par son échauffement interne, lié à la circulation des électrons, engendrée par le débit dans le récepteur.

La réalisation pratique du générateur va donc nécessiter un oscillateur, une bobine et un métal. Le problème le plus difficile est celui de l'oscillateur car il réclame une grande stabilité. L'idéal est d'utiliser un oscillateur à quartz, mais il s'agit d'un matériel beaucoup plus coûteux que les circuits oscillants qu'on peut monter soi-même. Il a par contre l'avantage d'être beaucoup plus stable dans le temps. La bobine ne pose aucun problème, sa self-inductance étant de l'ordre du millihenry (0,4 mH pour le montage que nous avons vu fonctionner). Le métal doit être aussi pur que possible, sans pour autant aller chercher la haute pureté chimique pour les premiers essais. M. Meyer avait choisi le cuivre, mais en principe le fonctionnement serait le même avec du fer, ou de l'aluminium. Le circuit récepteur, enfin, peut être constitué par une simple résistance passive pour faire les mesures, ou par tout appareil consommateur de courant.

Le générateur le plus perfectionné serait autoentretenu, c'est-à-dire qu'une partie du courant obtenu serait retourné à l'entrée pour assurer la marche de l'oscillateur ; dans l'état actuel des

expériences, l'alimentation est stabilisée à 12 V et 0,1 A soit à peu près 1 W. Mais le plus important pour la réussite de l'expérience reste la valeur précise de la fréquence, ce qui nécessite un matériel de mesure et de contrôle de haute qualité : oscilloscope, fréquencemètre et multimètre. L'ensemble coûte des milliers de francs.

Mais il s'agit d'un appareil que nous avons vu fonctionner et, à moins d'admettre une surprenante erreur de montage ou de conception, le résultat affiché prouve qu'il s'agit bien d'un appareil entièrement nouveau. L'entrée, nous l'avons dit, était faite en continu 12 V pour un dixième d'ampère. A la sortie, le multimètre indiquait 20 V et 0,36 A soit 7,2 W pour 1,2 W à l'entrée. La puissance de sortie était donc 6 fois celle d'entrée ; l'inventeur nous a dit avoir obtenu, après polarisation du conducteur de cuivre, 45 V et 1 A, donc 45 W. Le facteur de multiplication atteint là 37.

Il n'a pas été possible de retrouver une valeur aussi élevée lorsque nous sommes venus, la fréquence n'ayant pu être stabilisée avec assez de précision. Nous n'avons toutefois pas de raisons de douter des chiffres avancés par l'inventeur, l'intérêt principal résidant surtout dans le fait que l'appareil se comporte comme un véritable générateur d'énergie. La puissance mise à l'entrée n'a que peu d'importance dès le moment où elle n'est qu'une fraction de l'énergie récupérée à la sortie ; il suffit en effet de dériver une partie de la sortie vers l'entrée pour réaliser un générateur de puissance à fonctionnement continu. Notons cependant que le courant débité en sortie est alternatif, de fréquence comprise entre 100 et 1 000 Hz. Un dispositif approprié pourrait le ramener à 50 Hz et 220 V pour alimenter les appareils standard du marché. Il faudrait alors prévoir un autre convertisseur pour assurer l'alimentation en continu de l'oscillateur.

Restons-en pour l'instant au dispositif expérimental de Meyer. Il s'agit en fait d'une petite manipulation de laboratoire facile à reproduire par tout technicien disposant de l'appareillage mentionné, et c'est ce qui en fait l'intérêt. Car si l'inventeur n'a pas commis la moindre erreur d'interprétation, nous nous trouvons en face d'un appareil capable de modifier sensiblement notre civilisation dans la mesure où il peut être produit industriellement à peu de frais. Ce serait alors l'indépendance énergétique pour chacun, avec tous les avantages qui en résultent. Il est donc à souhaiter que l'expérience soit largement reprise afin de lui assurer la plus large diffusion si les résultats restent aussi prometteurs que le sont les premiers essais. Bien sûr, le principe a été breveté par M. Meyer qui travaille dès maintenant à perfectionner l'appareillage pour élever encore le rendement. Après le générateur synergétique dont nous avons parlé, il y a deux mois, voilà donc un deuxième appareil qui prouve la possibilité d'exploiter au bénéfice de chacun une énergie réellement inépuisable.

Renaud de la TAILLE ■

LA SYNERGÉTIQUE ATTEND TOUJOURS DES CONTRADICTEURS SÉRIEUX

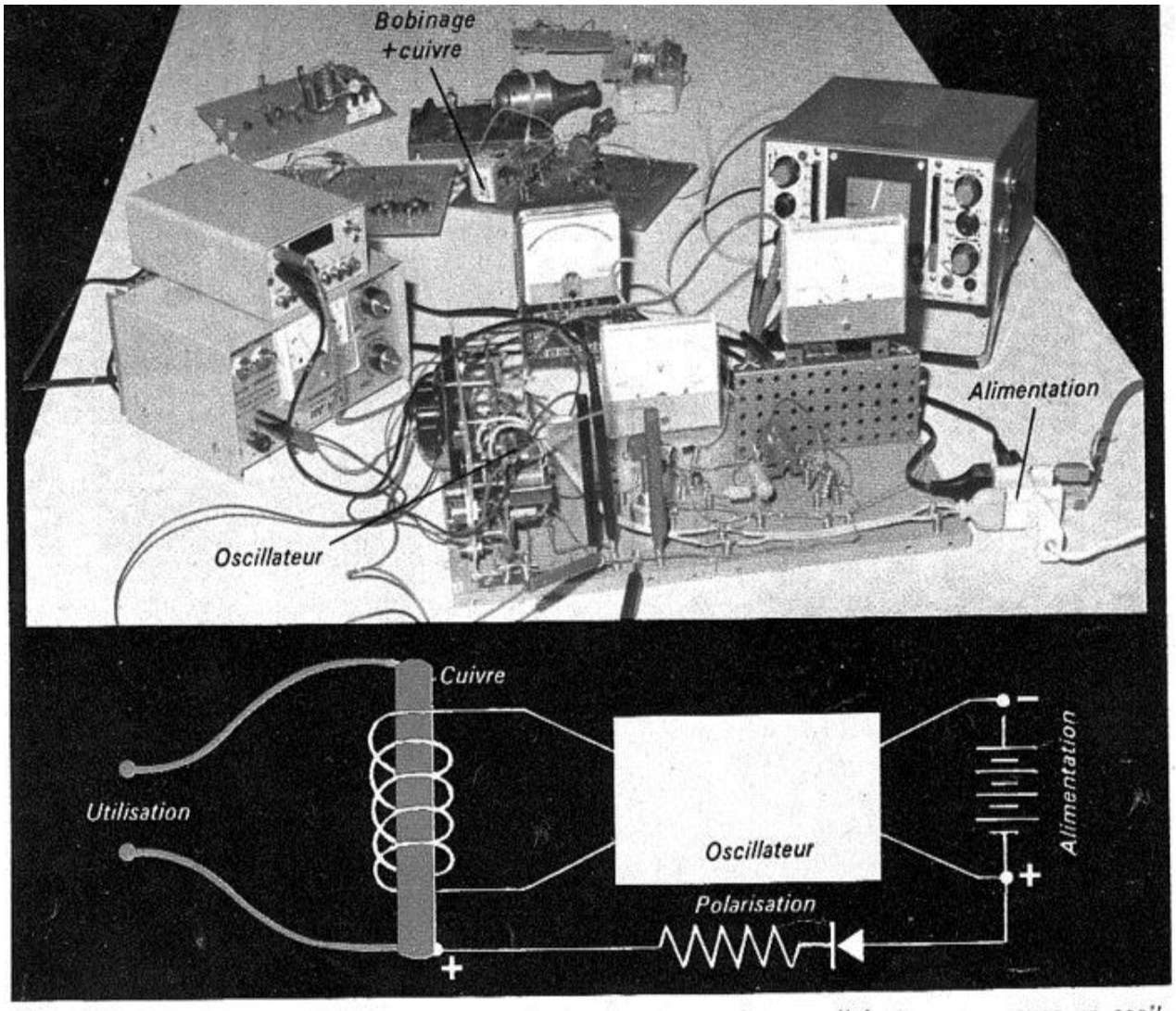
Notre article du mois de novembre sur la théorie synergétique et les expériences destinées à la vérifier nous a valu une masse de lettres. Pour la plupart, elles émanent de techniciens qui souhaitent reprendre l'expérience. Certains avaient même préparé quelques montages. A tous, nous avons été obligés de répondre la même chose : l'expérience faite en Belgique par Eric d'Hoker est un montage prototype destiné à vérifier une hypothèse, et non une machine industrielle dont nous pourrions diffuser les plans.

Dès maintenant, des expériences semblables à celle faite par E. d'Hoker sont en cours de réalisation dans plusieurs laboratoires. Précisons qu'elles se font sous l'œil critique de certaines « autorités » (notamment de la Faculté des Sciences) qui ont déclaré qu'elles ne manqueraient pas de donner toute la publicité nécessaire à l'affaire en cas de résultat négatif ; et dans le cas où l'expérience serait probante, qu'elles trouveraient bien moyen d'en expliquer le résultat dans le cadre de la physique classique. Un très bel exemple d'esprit scientifique et d'honnêteté intellectuelle...

Pour ce qui est du courrier, nous retiendrons seulement quelques passages dans les rares lettres qui apportent des éléments de contradiction. Pour M. Penarmen, professeur de sciences au Lycée de Quimperlé « ... ce que dit Vallée n'est qu'un exposé, selon sa dialectique propre, de faits connus depuis longtemps... dans l'article il n'y a que du vent... » Ne soyons pas méchants et relevons seulement que cette « opinion » ne nous informe guère sur les défauts de la synergétique.

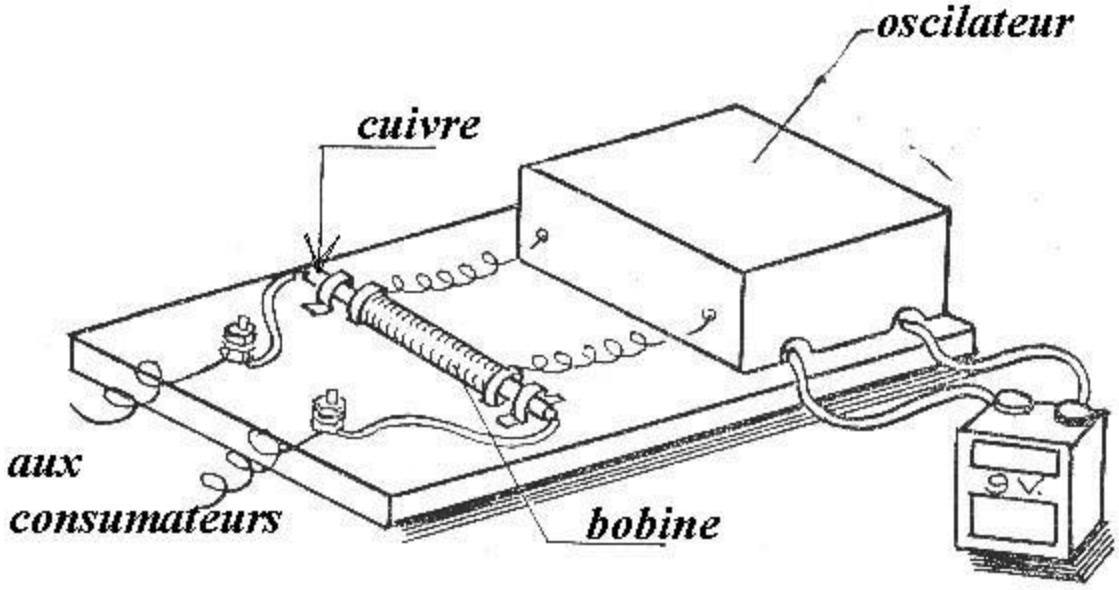
A Valence, M. Vergier, ingénieur, est lui « horrifié par le manque de sérieux de notre article sur la synergétique. » Il relève que nous avions écrit 38,67 V/m pour valeur limite du champ électrique au lieu de $38{,}67.10^{15}$ V/m. Il dit vrai, mais nous étonne quand il écrit « n'avoir rien trouvé dans le livre de Vallée qui contre le principe de conservation de l'énergie alors que l'expérience décrite (d'Hoker) fait paraît-il une drôle de brèche dans le mur ! En vrai, la conservation de l'énergie est à la base de la synergétique et se retrouve évidemment dans l'expérience qui ne contredit rien du tout : l'énergie débitée par le générateur est prise sur l'énergie diffuse de gravitation. Rien ne se perd, rien ne se crée, comment a-t-il pu voir le contraire ?

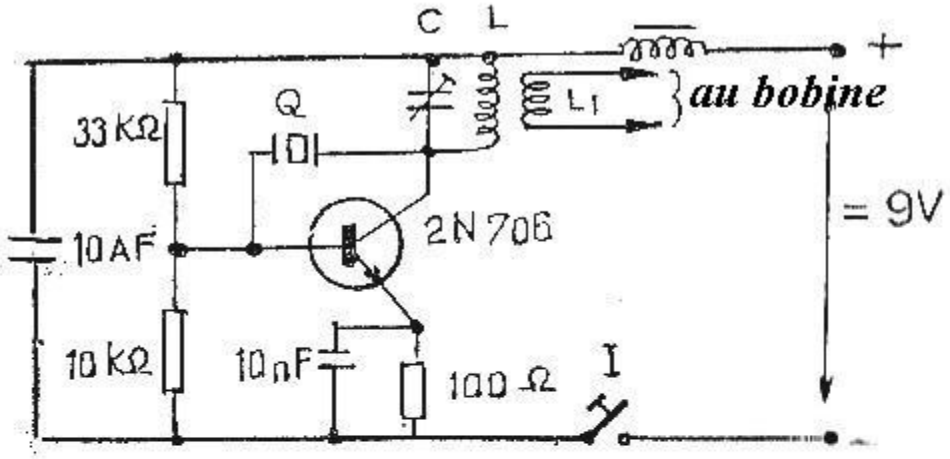
Enfin, plus intéressant, M. Leborgne, à St-Germain est tombé sur un ouvrage édité en 1934 intitulé « Le grand secret de l'univers, la gravitation expliquée par la radio-pression des ondes ultra-microscopiques ». On y trouve le principe d'une pression cosmogène omniprésente, milieu d'énergie vibratile permanent dans lequel nous baignons. L'auteur, P. Campbell, de Buenos Aires n'était autre que l'ambassadeur d'Argentine. Précisons que l'ouvrage était édité chez Hachette et que la thèse est, en effet, tout à fait synergétique. □



Pour secouer les atomes et leur faire rendre l'énergie qu'ils contiennent, il faut envoyer, avec un oscillateur à haute fréquence (de l'ordre de 173 kHz) une onde qui soit en résonance avec la vibration des électrodes du cuivre. Cela par l'intermédiaire d'un champ magnétique oscillant dû au bobinage relié à l'oscillateur et entourant le cuivre. Une partie du courant d'alimentation sert à polariser le métal, qui restitue alors jusqu'à 30 fois l'énergie consommée par l'oscillateur.

Une miniaturale „centrale electrique Meyer"





Q – *cristale de quartz*

Note :- alimentation „clasique" a 9 Volts ;

- le condensateur C este semivariable et

- la bobine a l'inductance L , alors,pour la frequence de 172 753,867 Hz on va calculer ,-

$LC = 1 / (4 \cdot \pi^2 \cdot f^2)$.

Ça marche !

French Patent # 2,385,255

2385255

La présente invention concerne le secteur de l'électro-technique et dans ce secteur les instruments générateurs d'énergie électrique sous forme de courant électrique.

Dans l'état actuel ces instruments fonctionnent soit par l'apport d'une énergie extérieure motrice qui agissant par le phénomène de l'induction produit un flux électronique soit par la rupture des liaisons électroniques dans les générateurs électro-chimique tous produisent moins d'énergie qu'ils n'en reçoivent dû au coéfficient de rendement, et présentent ainsi l'inconvénient de n'être que des transformateurs d'énergie.

Le dispositif de l'invention permet de créer de l'énergie au sein même de celui-ci, et par la réinjection d'une petite partie de l'énergie produite servant à alimenter le système d'auto entretenir la marche du système.

Le dispositif est issu des résultats des recherches sur la théorie unitaire des champs et plus particulièrement des calculs sur le champ électrique. L'effet recherché est l'éjection des électrons de l'atome par rupture de la liaison électron-noyau au moyen d'une fréquence de résonance . Le matériel mathématique se compose de tableaux de compilation des résultats des théories ondulatoires et quantiques.

Posons : Force centripète = Force du noyau

$Fe = \frac{mv^2}{} = \frac{1}{4\ II\ o\ N^2}\ \frac{e^2}{}$ = E m, l'énergie de l'électron

est $Et = moC^2 + \frac{1}{2}\ mov^2$ d'où $mov^2 = 2\ (Et - moc^2)$ dans Fe = Fm

$2\ \frac{(Et - moC^2)}{} = \frac{1}{4\ Eo}\ \frac{C^2}{2}$ posons $\frac{1}{4\ Eo} = k$

$2\ (Et - moC^2) = k\ \frac{e^2}{} = \frac{k\ e^2}{}$

d'où $= \frac{k\ e^2}{2\ (Et - moC^2}$ nous désirons que tende vers l'infini donc que :

$2\ (Et - moC^2)$ ⟶ tende vers zéro condition réalisée pour $Et = moC^2$

2ème V = $\frac{e^2}{}$ est le champ potentiel électrostatique engendré par le noyau .

si 0 dans la fonction d'onde du noyau résumé sous la forme (E - V) = 0 on peut identifier E = V toute réduction de V une réduction de E l'énergie du noyau (de V). Ce qui induit la possibilité d'utiliser l'énergie nucléaire dans notre calcul et donc de n'utiliser qu'une résonance , l'énergie totale étant celle du noyau. Si j'écris l'orbital de l'électron sous la forme simple :

$+ \frac{8}{h^2}$ C E -) = 0 avec $= \frac{-e^2}{}$

et si l'électron décrit par sa trajectoire doit répondre à la condition ET = moC^2, dans l'équation complète de sechrödinger on peut poser la condition décrite au ler.

0 = 1 ____ (_____) + 1 (_____) +

+ 1

E - = Et + _____ ; nous posons Et = moC^2

comme condition, mais isolons I en posant :

A =

et C = 1

0 = 1 A + B + C = 8 (E -)
h

pour que la fonction _____ o il faut que E - = o ainsi en ler nous avons montée que l'énergie de la particule devait être telle que Et = moC^2 en 2ème l'équotion ondulatoire donne la même condition les 2 aspects ondes-cerpuscules nous donnent le même résultat soit désormais :

- C^2 _____ = moC^2 ; - C^2 = moC^2 x 4

et 4 = $-C^2$

la période de resonnance d'un processus vibratoire est donnée par

T = 2

T est la période de résonance qui donne

$Et = moC^2$

moC^2 = énergie élémentaire de l'électron

0 = valeur classique du vide

0 = rayon de l'arbite fondamentale de référence

= change élementaire

I =

= I $\frac{dw}{dt}$ et $\frac{dw}{dt}$ = fréquence de Rydleig

de l'électron sur l'arbital et de valeur $\frac{moC^4}{8\,c}$

d'ou T =

l'application de valeurs numériques à f donne la fréquence des oscillations altérantes en résonance pour un atome particulier;l'électron décrit par la fonction ainsi altérée subit une répulsion et se trouve éjecté dans la liaison électron-noyau dont on a altéré une composante

Etude numérique

F =

= este = $8,854185\ F^{1}m^{-1} \times 10^{-12}$

h = $6,6252 \times 10^{-27}$ erg/s

= $6,625 \times 10^{-34}$ zoule/s

= $(9,1091) \times 10^{-31}$ kg

$\frac{\qquad\qquad}{8} = 2,17972 \times 10^{-18}$ zoule

$e = 1,602 \times 10^{-19}$ Coulomb

la fréquence de rydberg = $\frac{moC^4}{8} = 3,289842 \times 10^{15}$/S

$o = \frac{m^2 a o}{Z}$ $\quad ao = 0,5292 \times 10^{-10} = \frac{\qquad\qquad}{\qquad\qquad}$

m entier

Z = nombre de charge

f numérique =

avec pour valeur de rudberg $3,289\,842 \times 10^{-\frac{15}{2}}$

$$\frac{10^{-12} \quad 10^{-31} \quad \pm 10^{16} \quad \mp 10^{10}}{} = \frac{10^{-37}}{10^{-\frac{91}{2}}}$$

pour variable et Z

ordre de grandeur $\frac{N}{D} \quad \frac{10^{-37}}{10^{-\frac{91}{2}}}$ d'ou $\frac{N}{D} = 10 + \frac{17}{2}$

ordre de 108 f 109

compris entre 100 Mhz et 1 Ghz soit U.M.F.

Nous venons de démontrer qu'il fallait générer une fréquence d'oscillation des électrons de l'ordre de celles dénommées par la mention U.H.F. ultra haute-fréquence. La génératrice se compose d'éléments constitués en modèles issues des technologies déjà existantes et qui sont utilisés pour produire, une fréquence très stable U.H.F. convertir le courant produit suivant les besoins extérieurs celui-ci étant sous forme de courant continu réinjecter et auto-alimenter l'ensemble.

contrôler : les fréquences, intensité et tension et puissance dans les points clefs du système.

Le matériel se compose : d'une fréquence de résonnance fonction de deux variables m et z

- d'un métal ayant un m et un z déterminé (5)
- d'un générateur de fréquence U.H.F. (3)
- d'une antenne cylindrique U.H.F. entourant le barreau de métal (4)
- d'un fréquence mètre (3 bis)

- de batteries de démarrage et tampon (1 et 10)
- d'alimentations H.T B.T. stabilisées (2)
- d'ampérimètre, voltmètre, wattmètre (13)
- de tableau de contrôle de convertisseur AC ⟶ DC et DC ⟶ AC (7) - (9) - (12) - (11)
- de tampon de charge batterie 10
- charge frective fermant le circuit (6)

Principe de la réinjection : on utilise une partie du courant produit pour alimenter le circuit et créér une auto-alimentation (9) - (14 et 15)

L'assemblage de ces éléments est décris à l'aide du shéma principal joint à cette notice.

L'objet de l'invention étant une source de courant, son domaine d'application couvre l'ensemble des utilisateurs de courant et permet ainsi :

- La production de courant domestique et industriel, en place des centrales thermiques barrages et autre système.

- La production de courant assurant le fonctionnement des moteurs électriques pour les véhicules automobiles, et les véhicules à propulsion à hélice, maritime et aérien.

- La production d'énergie pour toutes les bases autonomes - polaires, lunaires, spatiales ou simplement isolées.

- Tous les domaines couverts usuellement par batteries, piles, groupes électro-générateurs.

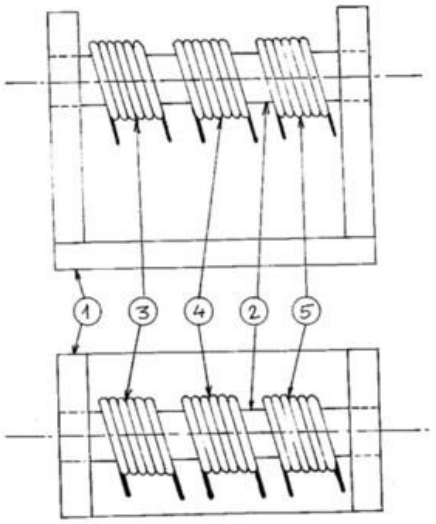
French Patent # 2,680,613

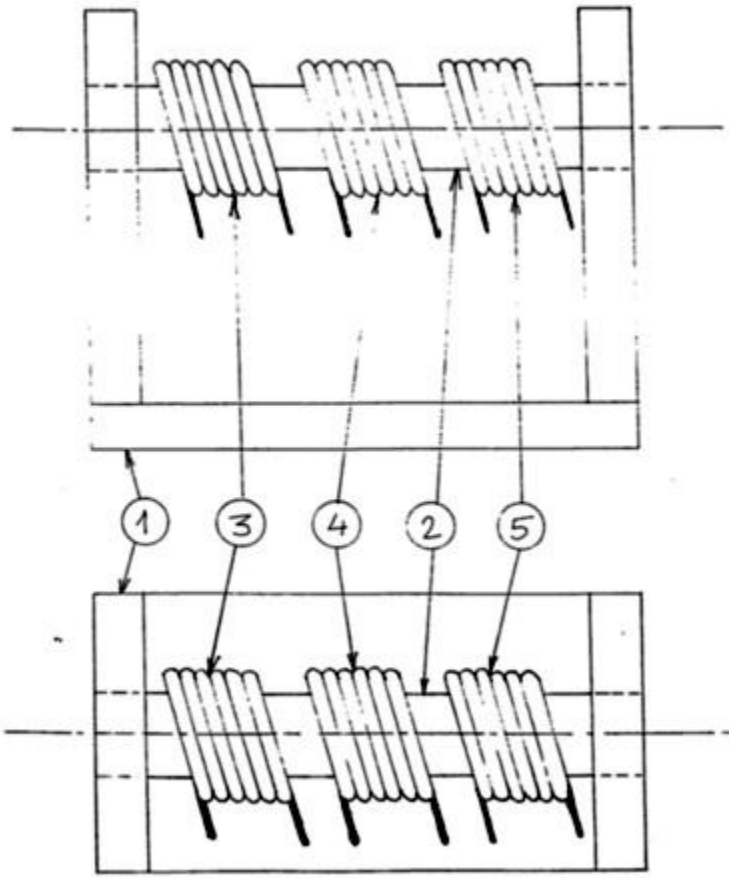
FR 2 680 613 - A1

(54) **Activateur pour mutation isotopique.**

(57) Générateur d'énergie par ferromagnétismes nucléaire résonnant constitué d'un châssis en forme de "U" en acier doux contenant une barre cylindrique en combustible ferromagnétique sur laquelle agissent au minimum 3 bobines d'inductions. La première bobine est un électroaimant, la deuxième est un activateur de résonance magnétique nucléaire, la troisième récupérant l'énergie d'induction présente dans la barre.

Dispositif particulièrement destiné à fournir une énergie électrique commercialement exploitable ainsi que d'effectuer des mutations d'isotopes.





La présente invention concerne un dispositif générateur d'énergie par ferromagnétismes nucléaire résonnant.

L'énergie nucléaire est traditionnellement obtenue par fission ou fusion de l'atome tandis que les flux magnétiques sont pour leur part traditionnellement obtenu par induction causée par la circulation d'électrons.

La présente invention utilise un phénomène physique que nous avons mis en évidence et que nous appellerons "Mutation Isotopique".

Description du principe physique appliquée au fer isotope 56 :

Le fer isotope 56 contient 26 protons, 26 électrons et 30 neutrons, sa masse totale est de 56.52 Mev, sa masse réelle étant de 55.80 Mev. La différence entre la masse totale et la masse réelle est de 0.72 Mev ce qui correspond à une énergie de cohésion par nucléon de 0.012857 Mev.

Si on introduit une énergie supplémentaire de 105 ev au noyau de fer isotope 56, celui ci aura un niveau d'énergie de cohésion par nucléon de 0.012962 Mev correspondant au fer isotope 54. L'instabilité créée par cet apport d'énergie va déterminé une radio-activité qui va muter le fer isotope 56 en isotope 54 avec une libération de 2 neutrons qui se transformerons en 9 minutes en Hydrogène par radio-activité naturelle.

Ce processus générera un gain d'énergie de 20000 ev puisque le défaut de masse du fer 54 résultant n'est que de 0.70 Mev au lieu de 0.72 Mev pour le fer isotope 56.

Pour apporter au noyau de fer isotope 56 l'énergie nécessaire pour effectuer la mutation isotopique, nous utilisons le principe de la résonance magnétique nucléaire.

Les 26 protons du fer isotope 56 sont à l'origine du moment magnétique nucléaire animé d'un mouvement gyroscopique dépendant de la masse réelle du noyau de fer. La perte de masse engendrée par le phénomène de mutation isotopique va modifier le moment gyroscopique et restituer de l'énergie par une augmentation de la vitesse de rotation.

Le phénomène physique de mutation isotopique décrit ci-dessus est applicable à tous corps du tableau de Mandeleiev.

Le dispositif selon l'invention est schématisé par la figure 1 en annexe.

Il est constitué d'une pièce métallique en acier doux (1) en forme de "U" et d'une barre cylindrique (2) en fer isotope 56 supportant les différentes bobines (3,4 et 5).

- La première bobine (3) constitue un générateur de champ magnétique d'une puissance de 0.5 Tesla permettant l'orientation des spins nucléaires des atomes de fer 56.

- La deuxième bobine (4) est parcourue par une onde sinusoïdale de 21 MHz de fréquence et de 10^{-4} Tesla de puissance ce qui constitue un activateur de résonance magnétique nucléaire permettant la rotation de 180° des spins nucléaires des atomes de fer.

- La troisième bobine (5) constitue un primaire de transformateur qui collecte l'énergie d'induction présente en tous points de la barre créée par la mutation isotopique des atomes de fer 56 en fer 54.

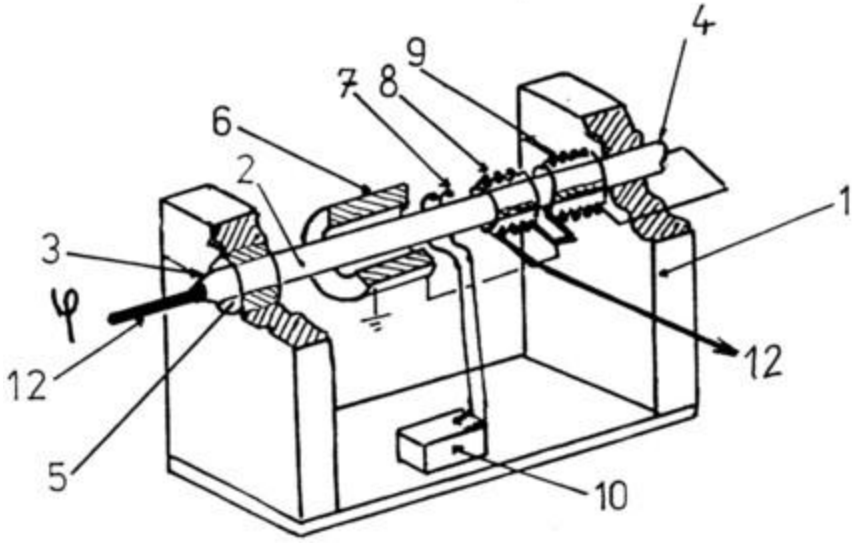
L'énergie récupérée peut ensuite être transformée sous une forme commercialement exploitable (tension 110-220-380 V et fréquence 50 à 400 Hz).

L'application de base qui en résulte est la création de générateur électrique autonome. La particularité de ce nouveau générateur est qu'il utilise une barre de métal ferromagnétique comme combustible ce qui lui donne une très grande autonomie ainsi qu'un très faible coût d'utilisation. Cette énergie électrique ou magnétique peut aussi être utilisée dans tous systèmes tel que les onduleurs, moteurs et réacteurs.

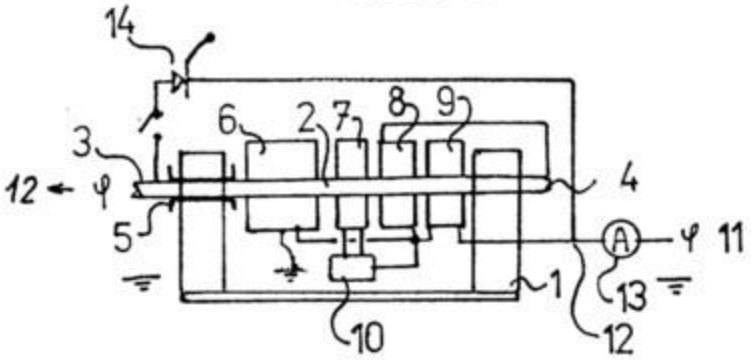
La seconde application qui en résulte est la transformation d'isotope en utilisant le même principe décrit par la figure 1 avec comme noyau magnétique (2) le métal à transformer et en ajustant les valeurs de réglages des différents composants pour correspondre à la mutation à réaliser.

Czechoslovakia Patent # 284,333

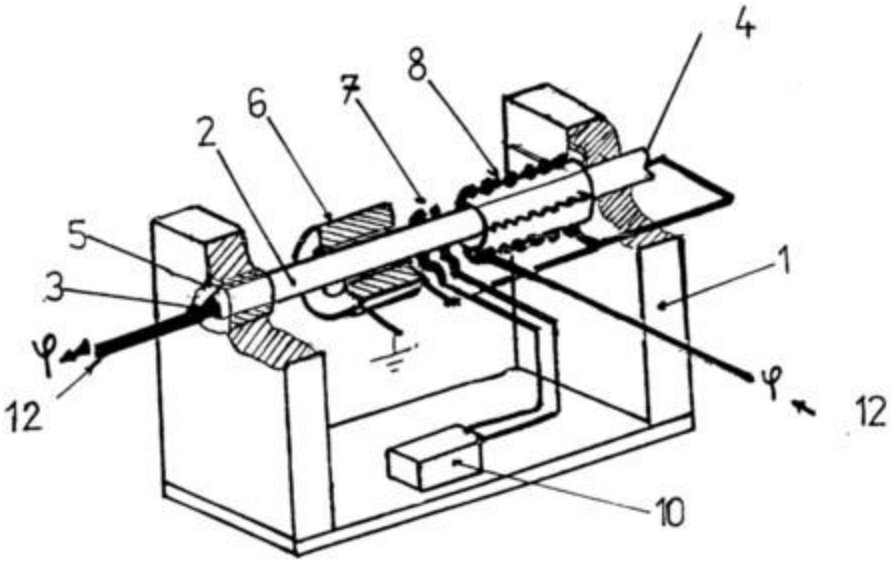
OBR.1



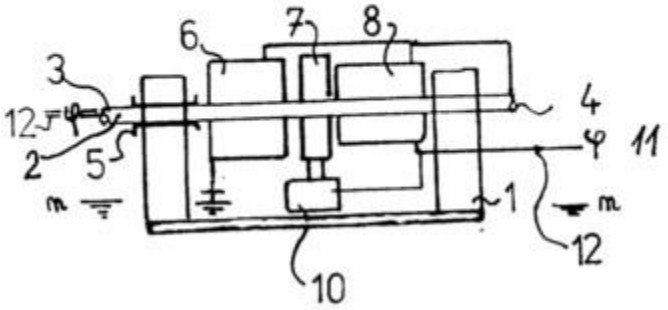
OBR. 2



OBR.3



OBR.4



CZ 284 333 B6

(54) Název vynálezu:

Způsob výroby energie s pomocí přeměny Fe 56 na Fe 54 cestou nukleární magnetické rezonance a zařízení k provádění tohoto způsobu

(57) Anotace:

V generátoru se vyvolá nukleární magnetická rezonance působením magnetickým polem a elektrickým proudem na železné jádro z Fe 56, načež se část proudu, získaného transmutací na Fe 54, přivádí zpět do jádra, zatímco zbývající část proudu se odvádí ze zařízení, což umožňuje odpojení zdroje a samočinný chod procesu až do vyčerpání Fe 56. Zařízení k provádění způsobu je generátor s jádrem ve formě tyče /2/ z Fe 56, nosnou konstrukcí /1/, indukčními cívkami /6, 7, 8, 9/, vstupem ze zdroje /11/, nutnými obvody a výstupem. Zařízení je opatřeno obvodem pro přívod části získaného proudu zpět do tyče /2/. Zařízení je výhodně opatřeno rozdělením výstupu proudu z tyče /2/ na dvě části, kde na jedné z nich je zapojen regulátor /14/ pro vypnutí zdroje /11/, zatímco druhá je zapojena na výstup ze zařízení.

Způsob výroby energie s pomocí přeměny Fe 56 na Fe 54 cestou nukleární magnetické rezonance a zařízení k provádění tohoto způsobu

Oblast techniky

Vynález se týká způsobu výroby elektrické energie s pomocí přeměny Fe 56 na Fe 54 cestou nukleární magnetické rezonance, kdy se působením magnetického pole a elektrického proudu vyvolá transmutace izotopu Fe 56 a uvolněné elektrony s energií, získanou přeměnou izotopu, se odvádí ve formě elektrického proudu. Současně je vyřešeno zařízení k provádění tohoto způsobu ve formě generátoru s jádrem z Fe 56.

Dosavadní stav techniky

V současné době jsou známy četné způsoby výroby energie. Nukleární energie se tradičně získává štěpením, nebo termonukleárními reakcemi atomů, zatímco energie magnetického vlnění se získává magnetickou indukcí, vyvolanou prouděním elektronů.

Je také známo, že energii je možno získávat s využitím principu nukleární magnetické rezonance. V přihlášce vynálezu F 9110472 A byl popsán postup, kdy se působením silného magnetického pole a elektrického proudu na izotop železa Fe 56 vyvolá izotopická mutace a Fe 56 se přemění na Fe 54, přičemž se uvolňuje množství energie. Železné jádro se zahřeje na teplotu alespoň 150 °C a vystaví se působení elektrického proudu a magnetické energii. Působením energie o síle $168{,}21 \times 10^{-13}$ J na železné jádro, tvořené izotopem Fe 56, se vyvolá nestabilita, která následně vyvolá radioaktivitu, jež pozmění železo Fe 56 na Fe 54 při současném uvolnění 2 neutronů. Ty se přemění v magnetickou energii a indukční zdroj navzájem. V přihlášce vynálezu F 9110472 je rovněž popsáno zařízení k provádění tohoto způsobu. Toto zařízení sestává z kovového dílu z měkké oceli o tvaru písmene hranatého "U", z válcové tyče, zhotovené z izotopu železa Fe 56, ze tří cívek, zdroje elektrického proudu a odvodu proudu a z nutných obvodů. První cívka tvoří generátor magnetického pole, který umožňuje usměrnění nukleárních spinů atomů železa 56. Druhá cívka působí jako aktivátor nukleární magnetické rezonance a umožňuje rotaci nukleárních spinů atomů železa o 180°. Třetí cívka tvoří transformátor, který sbírá přítomnou indukční energii. Ta je ze zařízení odváděna a poté podle potřeby přeměněna a komerčním způsobem využita.

Podstata vynálezu

Podstata vynálezu spočívá v tom, že je vyřešen způsob výrazně efektivnější výroby elektrické energie, využívající transmutace železa Fe 56 na Fe 54 cestou nukleární magnetické rezonance, to je izotopickou mutací, kde je alespoň část získávaného proudu přiváděna zpět do železného jádra. Zbývající proud je odváděn ze zařízení k dalšímu zpracování a využití. To umožňuje odpojení původního zdroje vstupního elektrického proudu, neboť dochází k jeho nahrazení přiváděnou částí vyrobeného proudu. Tím je dosaženo následného samočinného chodu výroby a také se zvyšuje množství získané energie. Proud, získaný izotopickou mutací železa, se tedy podle vynálezu rozděluje ve dvě části, z nichž jedna je odváděna zpět do železného jádra, prochází jím a na jiném místě je odváděna, a druhá část je odváděna ze zařízení. Vynález vychází z poznatku, že mezi izotopem Fe 56 a Fe 54 existuje potenciál energie, vázaný na rozdíl hmoty a soudržné energie. Působí-li se na železné jádro, sestávající z izotopu Fe 56, výchozí energií o velikosti $168{,}21 \times 10^{-19}$ J, zahřeje se toto jádro na teplotu 150 až 1500 °C. Jestliže se pak na jádro působí magnetickou energií o výkonu alespoň 460 W a kmitočtu 21 MHz při současné magnetické indukci o velikosti alespoň 0,5 T, izotop Fe 56 pohltí tuto primární energii

provedením obratu svého nukleárního spinu o 180° a následně uvolní dva neutrony, za vzniku izotopu Fe 54. Tyto dva neutrony při svém uvolňování uvolňují energii. Tato energie je podle vynálezu jednak použita pro další izotopickou mutaci železa, jednak je odváděna jako elektrický proud z výrobního zařízení, podle potřeby přeměněna a poté využita.

Poté, kdy hodnota odváděného proudu dosáhne alespoň hodnoty proudu nezbytné pro udržení procesu mutace, to je v optimálním případě vstupního proudu, odpojí se nebo vypne zdroj vstupního proudu a proces se nechá nadále probíhat samovolně, a to až do vyčerpání Fe 56. Po vyčerpání Fe 56 se může vyměnit jádro za nové a stejným způsobem celý proces opakovat. Navržený způsob výroby elektrické energie je podstatně efektivnější, než stávající způsob cestou izotopické mutace Fe 56 na Fe 54, je srovnatelný s ostatními způsoby získávání energie, jako je cestou štěpení nebo termonukleární cestou a je proto optimální pro komerční využití.

Současně je navrženo zařízení k provádění výše uvedeného způsobu výroby elektrického proudu. Zařízení k provádění způsobu podle vynálezu vychází ze stávajícího zařízení podle francouzské PV č. 9110472, kterým je generátor, sestávající z vodivé, nejlépe kovové konstrukce a v ní uloženého železného jádra z Fe 56 ve formě tyče, z alespoň tří indukčních cívek, ze zdroje vstupního elektrického proudu, alespoň jednoho zdroje napětí, z výstupu vyráběného proudu ze zařízení a nezbytných propojovacích obvodů. Železné jádro je uloženo tak, že tvoří magnetické jádro indukčních cívek. Cívky musí být alespoň tři, přičemž alespoň jedna cívka tvoří elektromagnet, který vytváří magnetické pole, alespoň jedna je vysokofrekvenční a vytváří oscilátor s deskou podstavce a alespoň jedna je nízkofrekvenční a slouží k získání magnetické energie, vydané železným jádrem. Železné jádro, to je tyč, sestávající z transmutovaného železa, je uložena tak, aby byl systém stabilní, proto je buď svislá, nebo je vodorovně upevněna v nosné konstrukci, výhodně v kovové vodivé konstrukci o tvaru písmene "U". Toto zařízení je ve srovnání se stávajícím navíc opatřeno obvodem pro přivádění proudu, získaného transmutací, zpět do tyče. Tento obvod umožňuje stimulaci transmutace přiváděním proudu z nejméně jedné z cívek zpět do železného jádra, to je tyče, přičemž je proud získaný transmutací z tohoto jádra na jiném místě odváděn. To lze realizovat tak, že výstup proudu z alespoň jedné nízkofrekvenční cívky je zapojen zpět na tyč, jinde než se nachází výstup proudu z tyče. Tím se podstatně zvyšuje výkon tohoto zařízení, a to cca na trojnásobek proti původnímu zařízení.

Zařízení je výhodně na vstupu pro přívod vstupního proudu ze zdroje opatřeno regulátorem pro vypnutí tohoto zdroje vstupního proudu. Tento regulátor je tedy připojen na vstup proudu do zařízení, ale je připojen rovněž i na výstup proudu ze zařízení a výstup proudu, získaného transmutací, z tyče. Proud odváděný ze železného jádra, to je proud zesílený o proud vzniklý transmutací Fe 56 na Fe 54, je tak výhodně veden přes regulátor, jenž je současně připojen na vstup primárního proudu do zařízení a výstup vyráběného proudu ze zařízení. Regulátor je nastaven tak, aby v okamžiku, kdy velikost do něj vstupujícího proudu dosáhne nastavené hodnoty, odpojil zdroj vstupního proudu.

Ekonomicky je výhodné, pokud je na regulátoru nastavena hodnota, která je rovná velikosti nezbytného vstupního proudu do zařízení. Po počáteční fázi, kdy zařízení začne provádět transmutaci Fe 56 na Fe 54 a když velikost vyráběného proudu dosáhne potřebné hodnoty, pak může následovat odstavení zdroje a bezeztrátový samočinný chod zařízení, a to až do ekonomického vyčerpání izotopu Fe 56.

Zařízení může mít různá variantní provedení. Minimální počet cívek je tři. Výhodnější z hlediska množství získané energie a rychlosti probíhající transmutace je, pokud má zařízení čtyři cívky. Ty jsou výhodně zvoleny a uspořádány tak, že první cívkou je elektromagnet, vytvářející magnetické pole alespoň 0,5 T. Druhou cívkou je cívka o vysoké frekvenci, to je o frekvenci vyšší než 21 MHz, a se zdrojem alespoň 467 W/gmol. Třetí a čtvrtá cívka jsou o nízké frekvenci, to je 45 až 55 Hz. Třetí a čtvrtá cívka mohou být případně spojeny v jedinou, případně může být vzhledem k požadovaným výrobním parametrům počet cívek větší. V případě uspořádání

zařízení se čtyřmi cívkami, které je podle našeho názoru optimální, je proud odváděn ze čtvrté a/nebo třetí cívky, nejlépe však mezi nimi, a odtud je veden zpět do železného jádra, nejlépe na druhý konec tyče. To je realizováno tak, že výstup proudu ze čtvrté a/nebo třetí cívky je zapojen na vstup do tyče, tvořící jádro, a ten se výhodně nachází na konci tyče. Proud pak prochází celou tyčí a při průchodu tohoto proudu tyčí probíhá transmutace Fe 56 na Fe 54 za jeho obohacení dalším proudem, získaným transmutací. Po průchodu tyčí je proud, obohacený o proud získaný transmutací, odváděn z opačného, tedy prvního konce tyče. Z toho důvodu se výstup pro tento proud nachází výhodně na prvním konci tyče, zatímco vstup proudu z cívky, případně cívek do tyče, se nachází na druhém konci tyče. Jeden z konců tyče musí být přitom opatřen izolačním pouzdrem pro jeho izolaci od podstavce. Cívky jsou zvoleny tak, že první cívka plní funkci elektromagnetu, vytvářejícího potřebné magnetické pole, druhá cívka je jiným zdrojem energie, vyvolávajícím oscilaci s podstavcem jako složka magnetické rezonance, a třetí a případně další cívky jsou aktivátory sinusoidních vln a tedy nukleární magnetické rezonance. Proud, obohacený o proud, získaný transmutací, odváděný z tyče je při uvedených parametrech v důsledku transmutace železa cca třikrát větší než proud do tyče vstupující.

Výstup proudu, získaného transmutací, z tyče je s výhodou opatřen rozdělením na dvě části, z nichž první část je připojena na vstup regulátoru, zatímco druhá část je připojena na výstup ze zařízení. Proud, odváděný z prvního konce tyče, to je proud, obohacený probíhající transmutací železa, je pak rozdělován na dvě části. Rozdělení je nejvýhodnější v poměru cca 1:9. První menší část proudu je pak odváděna do regulátoru a zapojena do napájecího okruhu, kde nahrazuje vstupní proud ze zdroje do zařízení a umožňuje tedy odpojení zdroje vstupního proudu a samočinný chod zařízení, zatímco druhá větší část proudu je odváděna na výstup ze zařízení k dalšímu zpracování jakožto energetický produkt. Uvedený poměr byl stanoven výpočty a experimentálně.

Zařízení podle vynálezu je vhodné pro komerční výrobu elektrické energie. Má podstatně vyšší výkon než zařízení, popsané v přihlášce F 1190472 A. Je srovnatelné se zařízeními, používanými k výrobě elektrické energie jinými cestami, jako například nukleární reakcí nebo štěpením. Přitom je toto zařízení ekologické a bezpečné a nevyžaduje vazbu na speciální zdroj energie.

Přehled obrázků na výkresech

Vynález je blíže objasněn pomocí výkresů, kde obr. 1 znázorňuje v řezu výhodné provedení generátoru s regulátorem a čtyřmi cívkami, obr. 2 znázorňuje schéma zapojení prvků tohoto generátoru, obr. 3 znázorňuje v řezu jednodušší provedení generátoru bez regulátoru a se třemi cívkami a obr. 4 znázorňuje schéma zapojení prvků tohoto generátoru.

Příklady provedení vynálezu

Příklad 1

Příkladným provedením vynálezu je generátor, znázorněný v řezu na obr. 1. a schématicky na obr. 2.

Generátor má základní nosnou konstrukci 1 o tvaru písmene "U", sestávající z dolní ploché desky a dvou bočnic, která je zhotovena z oceli a je pochromována. Rozměry této konstrukce 1 jsou stanoveny pro výkon 50 kW s lineární násobnou hodnotou nahoru nebo dolů. V bočnicích konstrukce 1 je v otvorech a s pomocí držáků upevněna železná tyč 2, sestávající z izotopu Fe 56. Levá bočnice má otvor o průměru tyče 2 a v něm je uložen první konec 3 tyče 2 tak, že je vytvořeno pevné spojení s dokonalou tepelnou i elektrickou vodivostí. Pravá bočnice má zvětšený otvor a v něm je uložen druhý konec 4 tyče 2, jenž je navíc opatřen teflonovým

pouzdrem 5 tak, že je od nosné konstrukce 1 izolován. Železná tyč 2 tvoří magnetické jádro čtyř cívek 6, 7, 8 a 9. Jsou zapojeny a zvoleny tak, že první cívka 6 je elektromagnet pro vytvoření magnetického pole 0,5 Tesla. Druhá cívka 7 je vysokofrekvenční, má velmi málo závitů, cca 20, a je napájena ze zesilovače 10 napětí, který dodává napětí 500 V na triodovou desku konstrukce 1 a vytváří s ní amplioscilátor třídy A. Třetí cívka 8 a čtvrtá cívka 9 jsou nízkofrekvenční s 50 Hz. Jsou navzájem zapojeny v sérii za sebou. Zařízení dále obsahuje zdroj 11 vstupního proudu, svorkovnice 12 pro vstup a výstup proudu do a ze zařízení, měřič 13 vstupního proudu, regulátor 14 automatického chodu a nutné elektrické obvody.

Zapojení prvků tohoto generátoru je znázorněno na obr. 2. Vstupní proud ze zdroje 11 je zapojen přes měřič 13 na první cívku 6 a třetí cívku 8, z jejichž výstupů je zapojen a tedy odváděn na čtvrtou cívku 9. Mezi třetí cívkou 8 a čtvrtou cívkou 9 je proud, obohacený již o část proudu vznikajícího transmutací železa Fe 56 na Fe 54, zapojen a tedy odváděn na druhý konec 4 železné tyče 2. Proud z první cívky 6 končí na uzemnění, zatímco proud ze třetí cívky 8 je zapojen na druhý konec 4 tyče 2, je veden přes celou tyč 2 a z prvního konce 3, obohacen o energii získanou přeměnou Fe 56 na Fe 54, je odváděn. Dále je rozdělen, jedna část je zapojena na regulátor 14 a je tedy do něj odváděna, druhá část je zapojena na výstup ze zařízení. Regulátor 14 je současně zapojen i na svorkovnice 12 vstupu a výstupu proudu do a ze zařízení. Je nastaven tak, že jakmile dosáhne část proudu, která je do něj přiváděna, hodnoty vstupního proudu, regulátor 14 vypne zdroj 11. Poté následuje automatický chod zařízení. Po vyčerpání izotopu Fe 56 se vyjme železná tyč 2 a vymění se za novou, načež se může celý proces opakovat. Při uvedených parametrech trvá proces buzení do vypnutí zdroje asi 15 minut, načež samotný automatický chod zařízení do vyčerpání izotopu Fe 56 trvá asi 2400 hodin. Tímto postupem se získá energie cca 32040×10^{-19}J, což dokazuje podstatně vyšší účinnost, než mají stávající zařízení k výrobě proudu.

Příklad 2

Jiným příkladným provedením vynálezu je generátor, znázorněný v řezu na obr. 3 a schématicky na obr. 4. Generátor má základní nosnou konstrukci 1 o tvaru písmene "U", sestávající z dolní ploché desky a dvou bočnic, která je zhotovena z oceli a je pochromována. Rozměry této konstrukce 1 jsou stanoveny pro výkon 50 kW s lineární násobnou hodnotou nahoru nebo dolů. V bočnicích konstrukce 1 je v otvorech a s pomocí držáků upevněna železná tyč 2, sestávající z izotopu Fe 56. Levá bočnice má otvor, v němž je uložen první konec 3 tyče 2, opatřený teflonovým pouzdrem 5 tak, že je vůči konstrukci 1 vytvořeno pevné spojení s dokonalou tepelnou i elektrickou izolací. Pravá bočnice má otvor o průměru tyče 2, v němž je uložen druhý konec 4 tyče 2 tak, že spojení vůči konstrukci 1 je dokonale vodivé. Železná tyč 2 tvoří magnetické jádro tří cívek 6, 7 a 8. První cívka 6 je elektromagnet pro vytvoření magnetického pole 0,5 Tesla. Druhá cívka 7 je vysokofrekvenční, má velmi málo závitů, cca 20, a je napájena ze zesilovače 10 napětí, který dodává napětí 500 V na triodovou desku konstrukce 1 a vytváří s ní amplioscilátor třídy A. Třetí cívka 8 je nízkofrekvenční s 50 Hz. Zařízení dále obsahuje zdroj 11 vstupního proudu, svorkovnice 12 pro vstup a výstup proudu do zařízení a ze zařízení a nutné elektrické obvody.

Zapojení prvků tohoto generátoru je znázorněno na obr. 4. Vstupní proud ze zdroje 11 je zapojen na třetí cívku 8 a na první cívku 6. Proud z první cívky 6 končí na uzemnění, zatímco proud z třetí cívky 8 je zapojen a tedy přiváděn na druhý konec 4 tyče 2, je veden přes celou tyč 2 a z prvního konce 3, obohacen o energii získanou přeměnou Fe 56 na Fe 54, je odváděn na výstup ze zařízení. Po vyčerpání izotopu Fe 56 se vyjme železná tyč 2 a vymění se za novou, načež se může celý proces opakovat. Při uvedených parametrech chod zařízení do vyčerpání izotopu Fe 56 trvá asi 2400 hodin. Tímto postupem se získá energie cca 32040×10^{-19}J, což dokazuje podstatně vyšší účinnost, než mají stávající zařízení k výrobě proudu.

Roy J. MEYERS

Absorber

C. Edholm: "Picks Power from Air" (*Technology World Magazine*, 1912 ?)

Dr L. Hirshberg: "Electricity from Air New Great Discovery (*Modern Electrics*, 1914 ?)

Roy J. Meyers: British Patent # 1098 (1913) --- Improvements in and Relating to Apparatus for Producing Electricity (PDF Format, requires Adobe Reader)

R. J. Meyers: British Patent # 1098 (1913) --- Transcription w/ enlarged figures

Notes & Comments

R. J. Meyers: British Patent # 1098 (1913) --- JPG version

***Technology World Magazine*, p. 279-281 (Year unknown, apparently circa 1912; another article about Meyers appeared in the November 1912 issue of *Electronic World*)**

"Picks Power from the Air"

by

Charlton Lawrence Edholm

A remarkable scene took place in the legislature of Arizona this spring when the lawmakers enthusiastically voted for the parole of a certain convict in the State penitentiary, granting him a leave of absence for 30 days and by means of private contributions raising a fund to defray his expenses to Washington DC and return.

The prisoner, Roy J. Meyers, is serving a 3-1/2 year sentence, but in spite of the fact that he bears the stigma of a convicted lawbreaker, he has demonstrated that a convict can be a useful member of society. During his imprisonment he perfected an electrical device of such original character as to arouse feelings of wonder and skepticism until experts had seen it in actual operation. It is a device to draw electricity from the atmosphere for light and power, and the 30-day parole was granted in order that the inventor might protect his rights through the patent office at Washington.

With the acquiescence of the legislature, Governor Hunt granted the parole and the prisoner was allowed to go free without any guard or any assurance but his word of honor that he would return. Two days before the period had elapsed, Meyer again presented himself before the governor, having accomplished his mission, and then returned to the penitentiary at Florence, where he continues to serve his sentence.

This, in brief, is the picturesque story which has called attention of the civilized world to a newly discovered electrical genius, and to another feature of the case which is of equal importance and human interest; namely, the enlightened policy pursued by our youngest State in its treatment of convicts...

Before entering the prison, Meyer had already applied for various patents, among them one for an improved trolley wheel head which prevents the trolley wheel from jumping the wire. Meyers had a conference with Superintendent Sims and Parole Clerk Sanders, and it was to these gentlemen that the inventor first explained the principles of his new device for securing electrical energy from the air. The officials were willing to give the man the opportunity to develop his plan and a little wooden building outside the walls was turned over to Meyers and was fitted up as a workshop and a laboratory. The first demonstration of the new apparatus was made shortly thereafter, the electricity drawn from the atmosphere being used to spark the gas engines of the pump house, and although the device was crude yet it did the work, and removed the doubts of his friends. Furtter development of the "absorber" followed, and his second model was constructed, and developed 8 volts. The machine came to the attention of the remarkable woman who brought his name before the legislature.

This was Miss Kate Barnard, State Commissioner of Charities and Corrections of Oklahoma, who was a guest of Mr. Sims, while studying prison conditions. She saw the machine at work, became familiar with the facts of Meyers' case, and was impressed by his rather blunt and unaffected personality, for Meyers has nothing of the polish or glibness of the poseur. He is a simple, earnest student of mechanical problems and not the sort of man to make a sentimental appeal for sympathy because of any grace of person or manner. Therefore it was the value of Meyers' invention, together with his essential integrity (in spite of his lapse) which so strongly impressed Miss Barnard that when she appeared before the Arizona legislature not long afterwards, addressing that body on the need of enlightened legislature along the line of her own work, she told the story of Roy Meyers and his epoch-making invention.

So, early in May, Meyers set out for Washington, unaccompanied.

In his own words: "When I arrived in Washington and laid my plans before the patent office experts, they merely smiled and told me that I would have to build a model and demonstrate my claims --- that it seemed strange that I, unknown as I am in the electrical world, should have accomplished the things for which Edison, Tesla and other experts have been striving for years.

"They could grasp the meaning of my drawings nor the explanation I tried to make to them. There was little time to spare, as I had only 20 days left of my leave, but I set to work in a few days was able to take a crude model around to the patent office to make a demonstration.

"Arriving at the patent office I telephoned to a friend who had been so kind as to introduce me and aid me in reaching the proper officials. The absorber was hoisted on two short poles and made to work. While they were as yet unable to understand the principles involved and hardly willing to believe their eyes, they were forced to admit that I had something new and different, and they told me that there would be no further objection; that I might file my application without further delay.

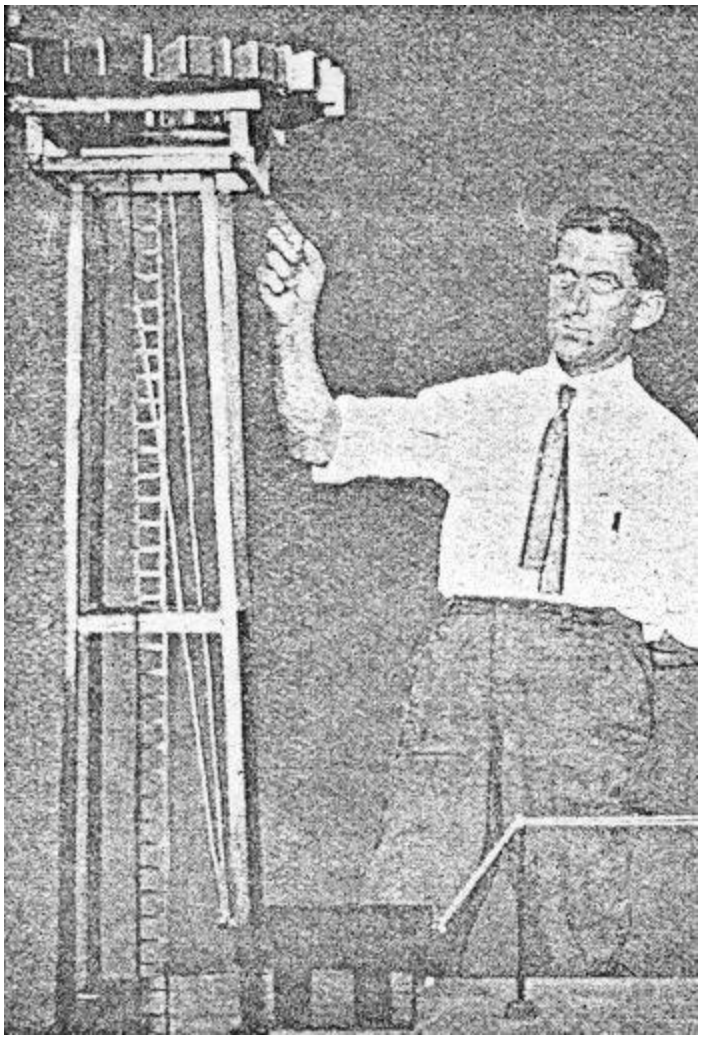
"I hope to construct my first large machine right here in Phoenix. I feel grateful; to Governor Hunt and others for what they have done for me and to the help they have given in securing protection I might not otherwise have had, and I am desirous of demonstrating this gratitude. I am going back to Florence today to resume the serving of my sentence, which will expire in 10 months. Then, here in Phoenix, I will begin the work of making my machines."

While there are some details of the device which the inventor refuses to make public, yet there are many general features that may be explained. It is planned that the machine, to be set up in Phoenix, will generate sufficient power to light the city, and will consist of a 200 foot tower upon which is placed the "absorber". The latter consists of a series of magnetized steel plates set in a circle (the manner of preparing them is kept secret) and this mechanism attracts the electricity from the atmosphere. This is carried by wires to a transformer in the engine house below and thence is applied to produce either power or light after the usual manner.

In an authorized statement Meyers says: "The flow of electricity is constant. When it emerges into the transformer it is in the form of a direct current. It will absorb the electricity day and night and will work whenever the wireless will work. I can put up a plant to supply such a building as the Adams Hotel for about $1500, and one of the principal items of the expense is the cost of the towers, the wires, the magnetizing of one set of plates, which is part of the secret of the treatment which makes it respond to the accumulations of the atmosphere.

"For use in the case of an electrical storm I have made what I call a modified form of circuit breaker, such as is commonly used as a lightning arrester on telegraph lines. In case of a storm the accumulator would suddenly become overcharged, possibly, and as the electricity would not of itself flow back into the air, the result might be disastrous. So I send it down into the ground, whenever the voltage rises above a certain amount."

Roy J. Meyers & the "Absorber"



Modern Electronics **(1914 ?)**

Electricity From Air New Great Discovery

by

Dr Leonard Keene Hirshberg

Working quietly in the heart of Baltimore for weeks on an invention which some critics say will revolutionize the method of converting electricity to practical use has been Roy J. Meyers, who like Benjamin Franklin, extracts the electric current from the air.

Mr Meyers invention was made last summer while he was confined in the penitentiary at Florence, Arizona. His first finished apparatus was made in Baltimore.

A practical, unlettered electrician, Mr Meyers, while in Arizona, was arrested on a comparatively minor charge and sent to the penitentiary. There he was placed in charge of the prison electrical plant, and there he says he made his discovery that the current which the civilized world is beginning to use most extensively for light and power could be transformed from the atmosphere without the aid of moving machines or batteries.

Miss Kate Barnard, Commissioner of Charities and Corrections, of Oklahoma, hearing of Meyers' invention and of his desire to have it patented, appeared before the Arizona Legislature to make an appeal in behalf of the young convict. As a result a special bill was passed which granted Meyers a month's leave of absence on parole. He went unaccompanied to Washington, filed his patent applications and returned to the penitentiary. Since then he has been indefinitely paroled.

He came to Baltimore as the place where he could easily obtain the mechanical parts needed to make a more nearly perfect machine than the crude model he has fashioned in the penitentiary workshop, and is making his headquarters here while working on his invention. With him is W.E. Chenot, who has been his assistant in assembling and testing the machine and who says that he has bought Meyers' patent rights for Germany.

They have proved beyond doubt that the invention is practical and that when finally brought to a state of perfection it will introduce a new epoch in the industrial use of electricity. By Westinghouse meters they tested the strength of the current gathered from the air, and with the use of only two of the four rectifying transformers the voltmeter recorded four and one-half volts, and the ammeter, which had the capacity of recording 75 amperes, was broken by the force of the current.

The machine itself is simple. It is in reality a transformer, which is familiar to anyone knowing anything at all about electricity in its practical uses. On a high tripod, which resembles somewhat the framework of a windmill tower, is the transformer, which Mr Meyers calls his 'absorber'. It is made up of an iron core, wrapped with copper wire. The secret of the invention is the manner in which the disks composing this 'absorber' are magnetized, and this secret Meyers says he found by accident while at work in prison.

What the machine, when finally perfected, will do is yet to be seen. Its inventor claims that it will greatly reduce the cost of making electricity. No batteries of any kind are needed, he says, and not a part of the machine turns upon the other. It is as durable, apparently, as an electric light pole. One of these machines, says Meyers, when perfected may be placed on a vehicle and transform enough electricity to give motive power, be that vehicle a locomotive or an automobile. He declared it can be placed on a building to furnish electric lights or power, and that the only wear will be upon the machinery which its current runs.

Meyers is 34 years old and he gained his knowledge of electricity by working in shops along the Pacific Coast. The depths of the mysteries of electricity he has not explored, but he is certain that he has found the means of absorbing it from the air and of converting it to the use of mankind.

British (GB) Patent # 191301098

Improvements in and Relating to Apparatus for Producing Electricity.

1-14-1914

Roy Jerome Meyers

Classification: - international: H05F7/00; H05F7/00; - european: H05F7/00
Application number: GBD191301098 19130114
Priority number(s): GBT191301098 19130114
Abstract ~ Vapour apparatus, arrangements of. - A rectifier for use with apparatus for producing electricity from the earth consists of mercury- vapour lamps constructed and arranged as shown in Fig. 4. Each lamp comprises two wires 6<1>, 7<1> wound around a steel tube 15 surrounding a mercury tube 11 preferably of copper. The coil 6<1> is connected between the electrode 14 and the terminal 18, and the coil 7<1> between the terminals 19, 5. The coils 6<1>, 7<1> are preferably composed of soft iron. Reference has been directed by the Comp- troller to Specifications 16,709/87, 14,033/99, and 5457/11, [all in Class 53, Galvanic batteries], and 15,412/06.

British Patent # 1098

(January 14, 1913)

Improvements in and Relating to Apparatus for Producing Electricity

Roy Jerome Meyers

This invention relates to improvements in apparatus for the production of electrical currents, and the primary object in view is the production of a commercially serviceable electrical current without the employment of mechanical or chemical action. To this end the invention comprises means for producing what I believe to be dynamic electricity from the earth and its ambient elements.

I am, of course aware that it has been proposed to obtain static charges from upper strata of the atmosphere, but such charges are recognized as of widely variant potential and have thus far proved of no practical commercial value, and the present invention is distinguished from all such

apparatus as has heretofore been employed for attracting static charges by the fact that this improved apparatus is not designed or employed to produce or generate irregular, fluctuating or other electrical charges which lack constancy, but on the other hand I have by actual test been able to produce from a very small apparatus at comparatively low elevation, say about 50 or 60 feet above the earth's surface, a substantially constant current at a commercially usable voltage and amperage. This current I ascertained by repeated tests is capable of being readily increased by additions of the unit elements in the apparatus hereinafter set forth, and I am convinced from the constancy of the current obtained and its comparatively low potential that the current is dynamic and not static, although, of course, it is not impossible that certain static discharges occur and, in fact, I have found occasion to provide against the damage which might result from such discharge by the provision of lightning arresters and cut-out apparatus which assist in rendering the obtained current stable by eliminating sudden fluctuations which sometimes occur during conditions of high humidity from what I consider static discharges. The nature of my invention is obviously such that I have been unable to establish authoritatively all of the principles involved, and some of the theories herein expressed may possibly prove erroneous, but I do know and am able to demonstrate that the apparatus which I have discovered does produce, generate, or otherwise acquire a difference of potential representing a current amperage above stated, or varied therefrom at the will of the operator according to the uses which the current is to be subjected.

The invention comprises generically means for producing electrical currents of serviceable potential substantially without the employment of mechanical or chemical action, and in this connection I have been able to observe no chemical action whatever on the parts utilized although deterioration may possibly occur in some of the parts, but so far as I am able to determine such deterioration does not add to the current supply but is merely incidental to the effect of climatic action.

The invention more specifically comprises the employment of a magnet or magnets and a co-operating element, such as zinc disposed adjacent to the magnet or magnets and connected in such manner and arranged relative to the earth so as to produce current, my observation being that current is produced only when such magnets have their poles facing substantially to the north and south and the zincs are disposed substantially along the magnets.

The invention also comprehends other details of construction, combinations and arrangements of parts as will hereinafter be fully set forth and claimed.

In the accompanying drawings:

Figure 1 is a top plan view of an apparatus embodying the features of the present invention, the arrow accompanying the figure indicating substantially the geographical north, parts of the figure being diagrammatic for condensing the showing.

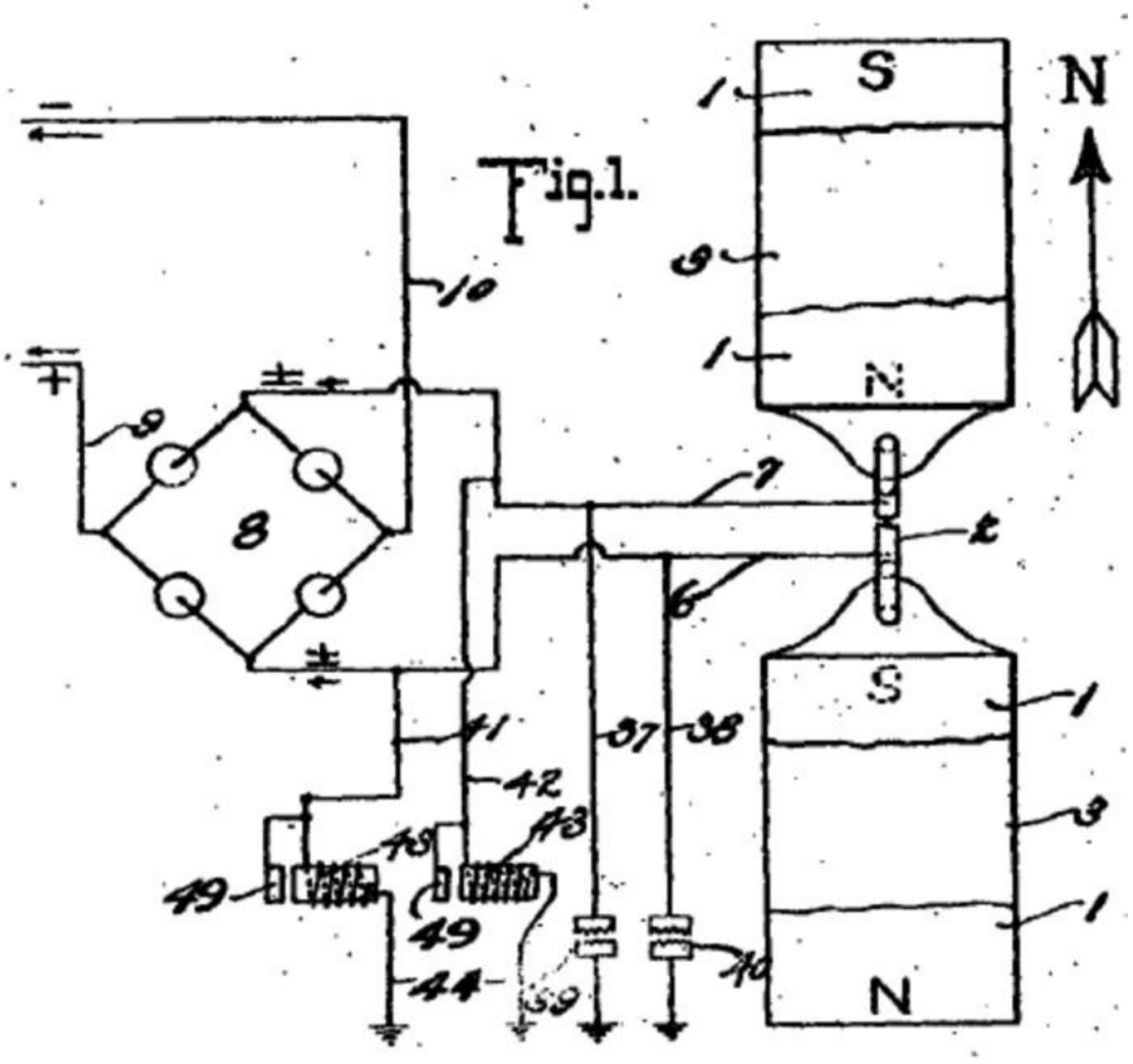


Figure 2 is a view is side elevation of the parts seen in plan in Figure 1.

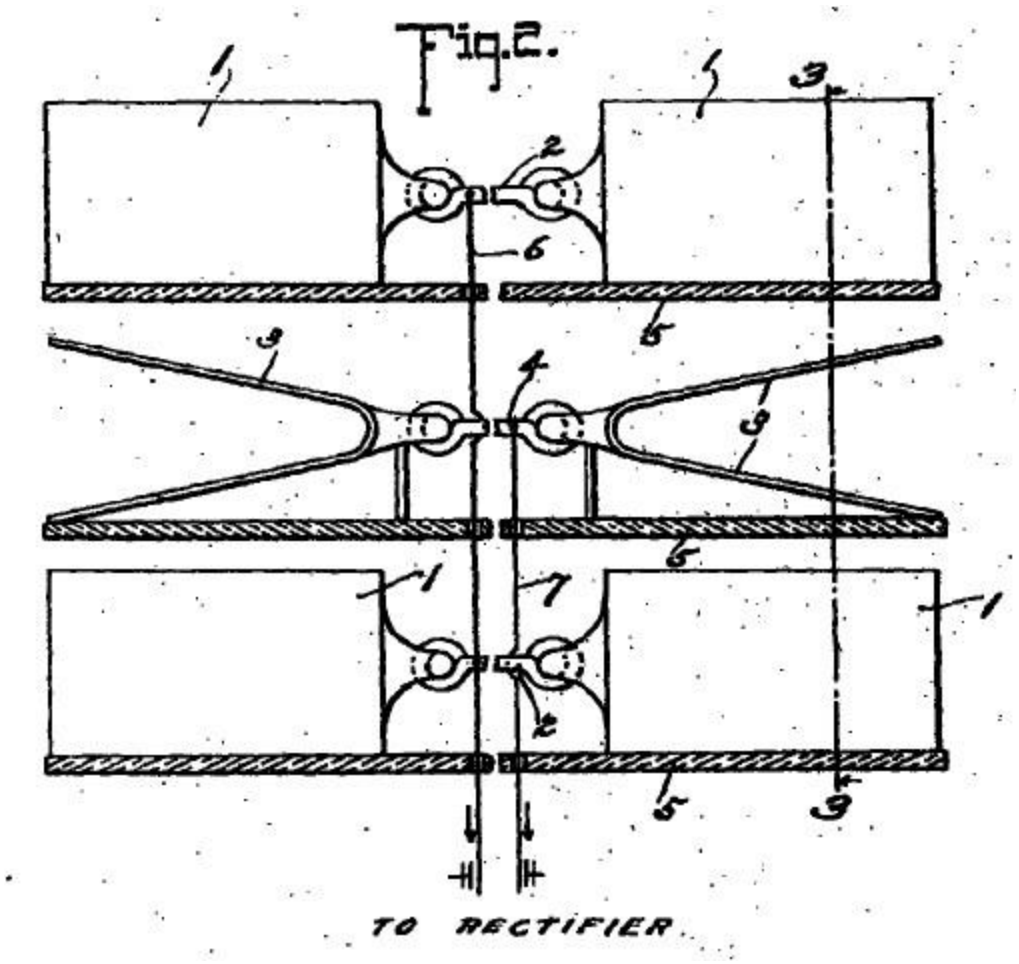


Figure 3 is a vertical section taken on the plane indicated by the line 3-3 of Figure 2 and looking in the direction indicated by the arrow.

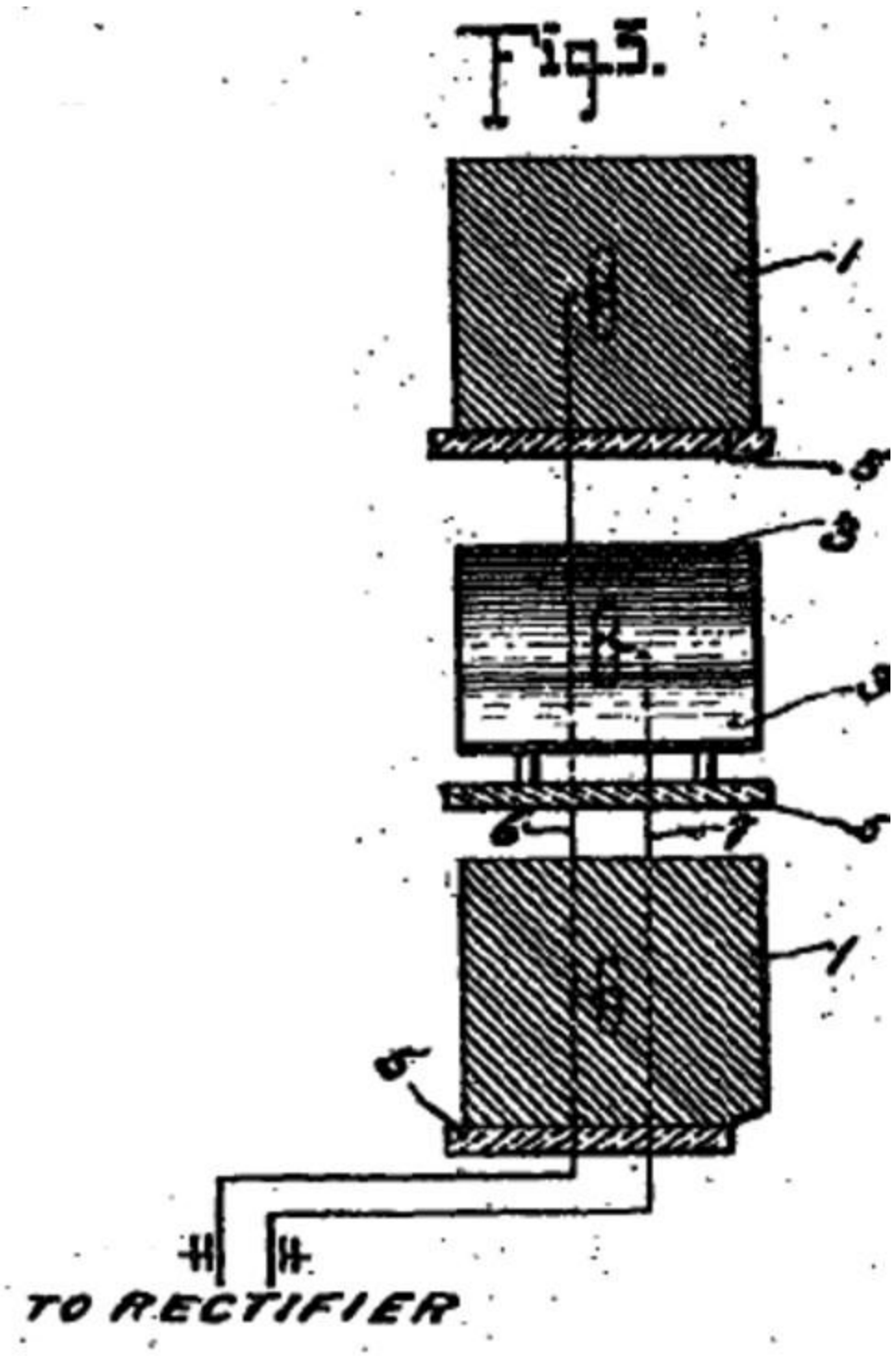


Figure 4 is a detail view partly in elevation and partly in section showing the detail connections of the converter and intensifier.

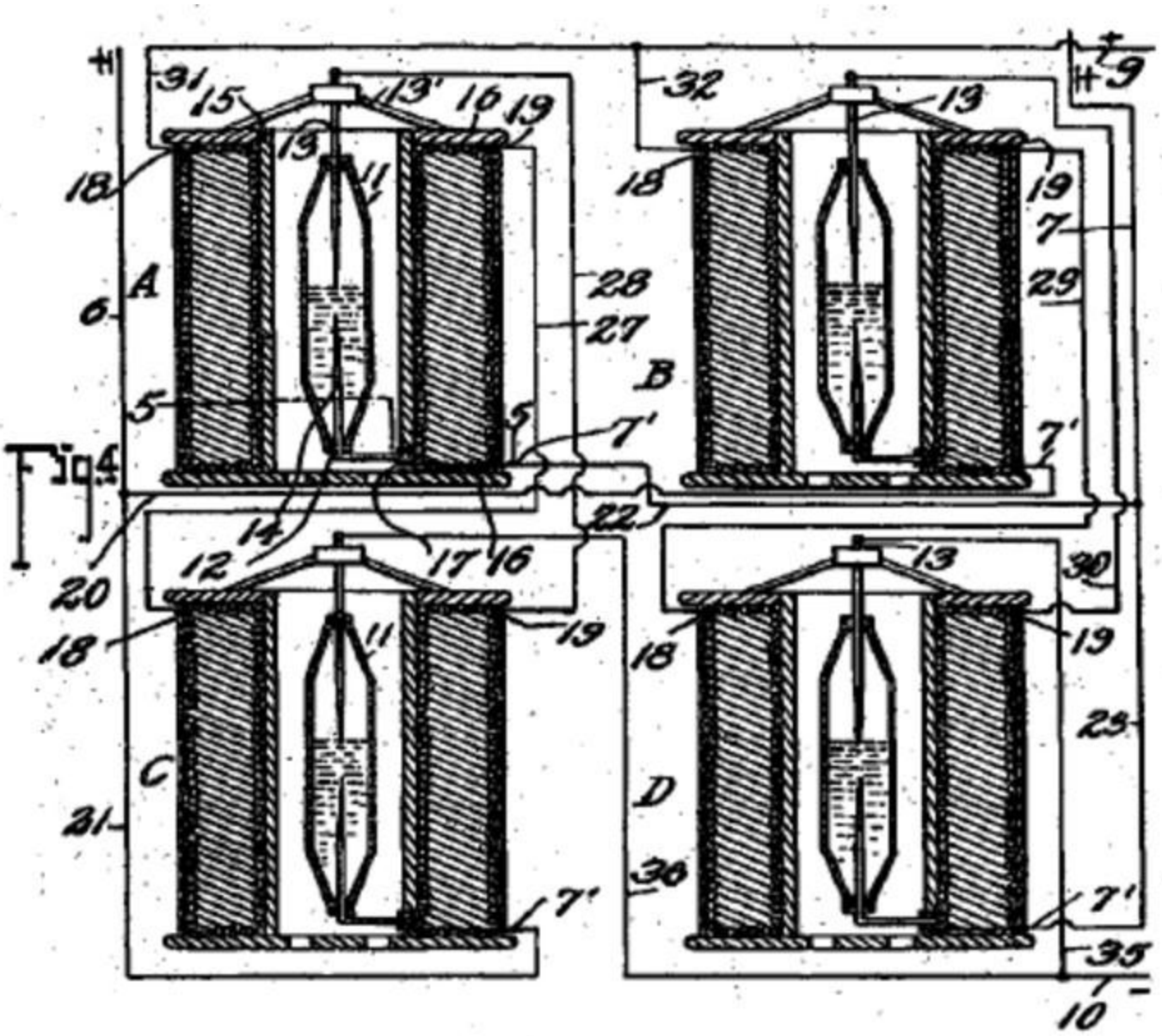


Figure 5 is a transverse section taken on the planes indicated by line 5-5 of Figure 4 and looking downwardly.

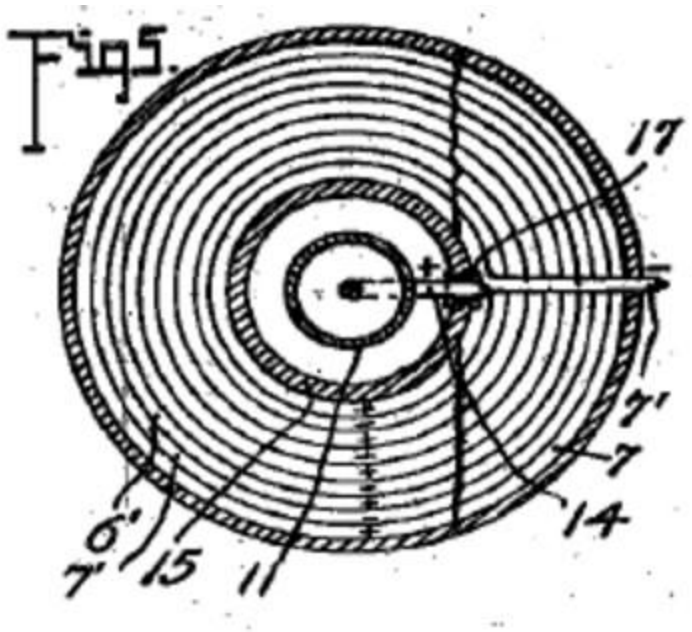


Figure 6 is an enlarged detail fragmentary section illustrating the parts at the juncture of the conductors and one of the intensifiers.

Figure 7 is an enlarged detail view partly in elevation and partly in section of one of the automatic cut-outs and

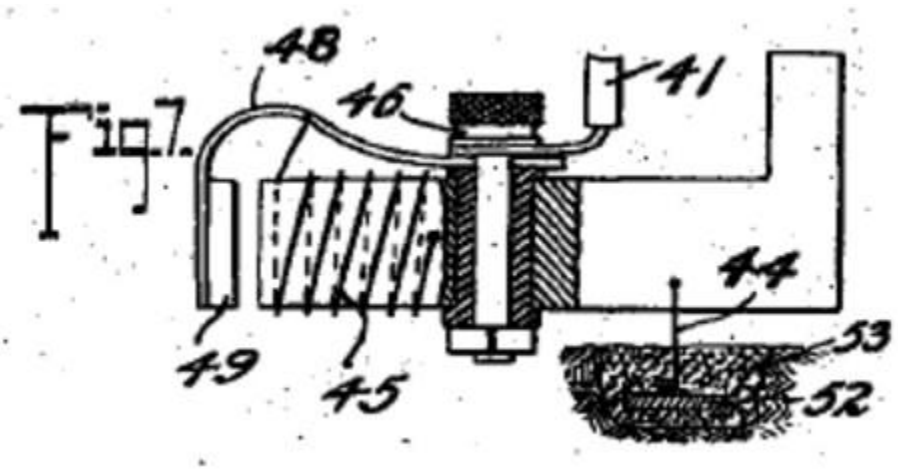
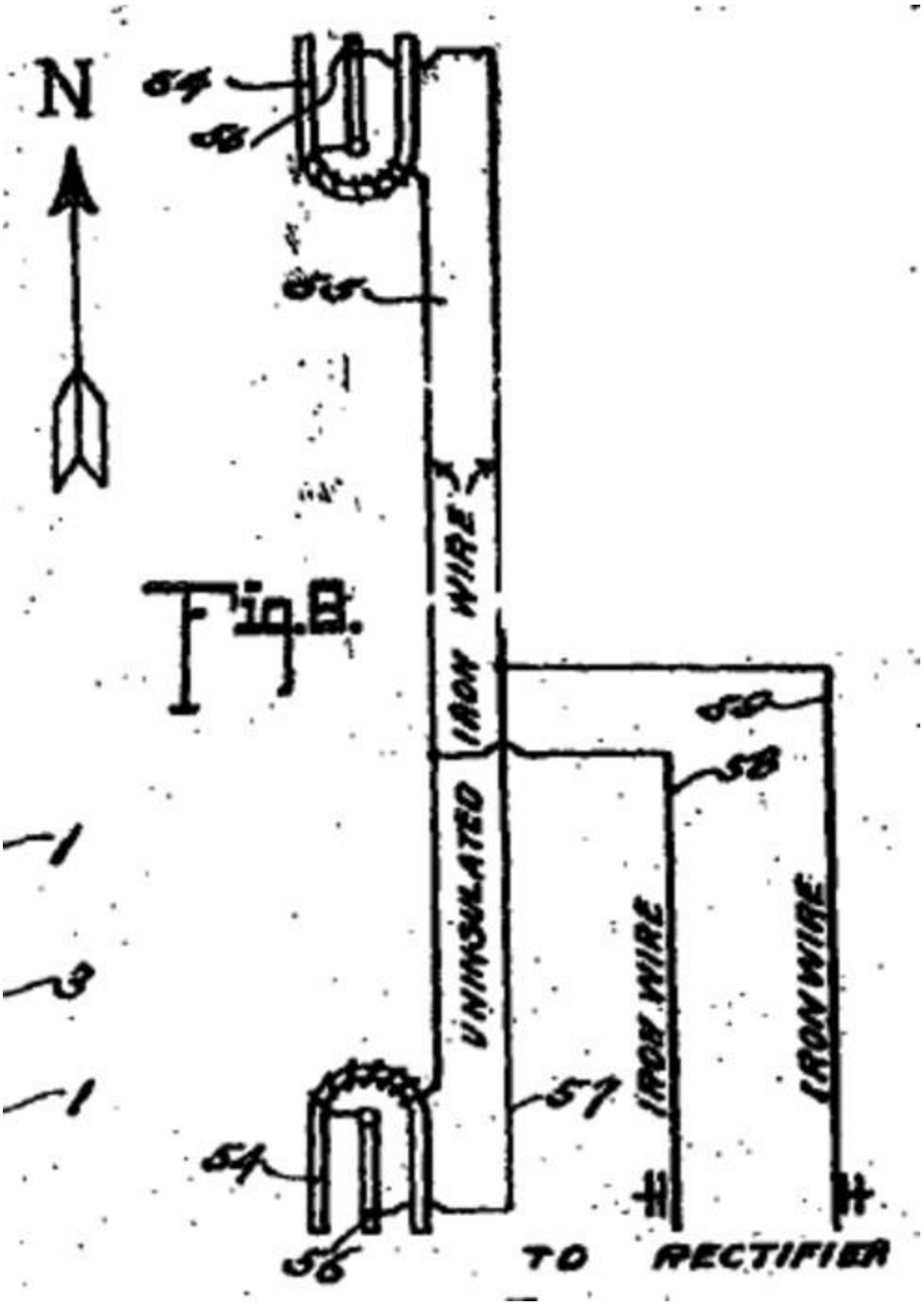


Figure 8 is a diagrammatic view of one of the simplest forms of embodiment of the invention.



Referring to the drawing by numerals, 1,1 indicates magnets connected by a magnetic substance 2, preferably an iron wire. The magnets 1 are arranged in pairs, one pair being spaced beneath the other, and interposed between the magnets are zinc plates 3,3 connected by an iron wire conductor 4. Suitable insulating supports 5 are arranged for sustaining the respective magnets 1 and plates 3,3. Each plate 3 is preferably bent substantially into V form, as clearly seen in Figure 1, and the V1 of one of the plates opens or faces toward the north and the V of the other plate to the South. I have determined by experimentation that it is essential that the plates 3 be disposed substantially north and south with their flat faces approximately parallel to the adjacent faces of

the co-operating magnets, although by experience I have not discovered any material difference in the current obtained when the plates are disposed slightly to one side of north and south, as for instance when the plates are disposed slightly to one side of north and south, as for instance when disposed in the line of the magnetic polarity of the earth. The same is true with respect to the magnets 1, the said magnets being disposed substantially north and south for operative purposes, although I find that it is immaterial whether the north pole of one of the magnets is disposed to the north and the south pole to the south, or vice versa, and it is my conviction from experience that it is essential to have the magnets of each pair connected by magnetic material so that the magnets substantially become one with a pole exposed to the north and a pole exposed to the north. In Figure 1, I have indicated in full lines by the letters 8 and N the respective polarities of the magnets 1, and have indicated in dotted lines the other pole of those magnets when the connection 2 is severed. I have found that the magnets and zinc plates operate to produce, whether by collection or generation I am not certain, electrical currents when disposed substantially north and south, but when disposed substantially east and west no such currents are produced. I also find that the question of elevation is by no means vital, but it is true that more efficient results are obtained by placing the zincs and magnets on elevated supports. I furthermore find from tests that it is possible to obtain currents from the apparatus with the zincs and magnets disposed in a building or otherwise enclosed, although more efficient results are obtained by having the said elements arranged in the open.

While in Figures 1, 2, and 3, I have shown the magnets and the zinc plates as superimposed, it will be apparent, as hereinafter fully set forth, that these elements may be juxtaposed in horizontal planes, and substantially the same results will be secured. Furthermore, the magnets 1 with the interposed zincs 3, as shown in Figures 1, 2 and 3 merely represent a unit which may be repeated either horizontally or vertically for increasing the current supply, and when the unit is repeated the zinc plates are arranged alternating with the magnets throughout the entire series as hereinafter indicated.

A conductor 6 is connected in multiple with the conductors 2 and a conductor 7 is connected with conductor 4, the conductor 6 extending to one terminal of a rectifier which I have indicated by the general reference character 8, and the conductor 7 extending to the other terminal of said rectifier. The rectifier as seen in diagram in Figure 1 may assume any of several well known embodiments of the electrical valve type and may consist of four asymmetric cells or Cooper-Hewitt mercury vapor lamps connected as indicated in Figure 1 for permitting communication of the positive impulses from the conductor 6 only to the line conductor 9 and the negative impulses from conductor 6 on only to the line conductor 10. The current from this rectifier may be delivered through the conductors 9 and 10 to any suitable source for consumption.

While the said rectifier 8 may consist of any of the known types, as above outlined, it preferably consists of a specially constructed rectifier which also has the capacity of intensifying the current and comprises specifically the elements shown in detail in Figures 4, 5, and 6 wherein I have disclosed the detail wiring of the rectifier when composed of four of the rectifying and intensify in elements instead of asymmetric cells or simple mercury vapor valves. As each of these structures is an exact embodiment of all the others, one only will be described, and the description will apply to all. The rectifying element of each construction consists of a mercury tube 11 which is preferably formed of glass or other suitable material, and comprises a cylinder

having its end portions tapered and each terminating in an insulating plug or stopper 12. Through the upper stopper 12 is extended the electrode 13 which extends well into the tube and preferably substantially one-half the length thereof to a point adjacent the inner end of an opposing electrode 14 which latter electrode extends thence downwardly through the insulation 12 at the lower end of the tube. The tube 11 is supplied with mercury and is adapted to operate on the principle of the mercury vapor lamp, serving to rectify current by checking back impulses of one sign and permitting passage of impulses of the other. To avoid the necessity for utilizing a starter, as is common with the lamp type of electrical valve, the supply of mercury within the tube may be sufficient to contact with the lower end of the electrode 13 when current is not being supplied, so that as soon as current is passed from one electrode to the other sufficiently for volatilizing that portion of the mercury immediately adjacent the lower end of electrode 13, the structure begins its operation as a rectifier. The tube 11 is surrounded by a tube 15 which is preferably spaced from tube 11 sufficiently for allowing atmospheric or other cooling circulation to pass the tube 11. In some instances, it may be desirable to cool the tube 11 by a surrounding body of liquid, as hereinafter indicated. The tube 15 may be of insulating material but I find efficient results attained by the employment of a steel tube, and fixed to the ends of the of the tube are insulating disks 16, 16 forming a spool on which are wound twin wires 6^1 and 7^1, the wire 6^1 being connected at the inner helix of the coil with the outer end of the electrode 14, the lower portion of said electrode being extended to one side of the tube 11 and passed through an insulating sleeve 17 extending through the tube 15, and at its outer end merging into the adjacent end of the wire 6^1. The wire 7^1 extends directly from the outer portion of the spool through the several helices to a point adjacent the juncture of the electrode 14 with wire 6^1 and thence extends in mechanical parallelism with the wire throughout the coil, the wire 6^1 ending in a terminal 18 and the wire 7^1 ending in a terminal 19. For the sake of convenience of description and of tracing the circuits, each of the apparatus just above described and herein known as an intensifier and rectifier will be mentioned as A, B, C and D, respectively. Conductor 6 is formed with branches 20 and 21 and conductor 7 is formed with similar branches 22 and 23. Branch 20 from conductor 6 connects with conductor 7^1 of intensifier B and branch 21 of conductor 6 connects with the conductor 7^1 of intensifier C, while branch 22 of conductor 7 of intensifier C, while branch 22 of conductor 7 connects with conductor 7^1 of intensifier D. A conductor 27 is connected with terminal 19 of intensifier A and extends to and is connected with the terminal 18 of intensifier C, and a conductor 7 connects with conductor 7^1 of intensifier D. A conductor 27 is connected with terminal 19 of intensifier A. and extends to and is connected with terminal 18 of intensifier C, and a conductor 28 is connected with the terminal 19 of intensifier C and extends from the terminal 19 of intensifier B to the terminal 18 of intensifier D to electrode 13 of intensifier B. Each electrode 13 is supported on a spider 13^1 resting on the upper disk 16 of the respective intensifier. Conductors 31 and 32 are connected with the terminals 18 of intensifiers A and B and are united to form the positive line wire 9 which co-operates with the negative line wire 10 and extends to any suitable point of consumption. The line wire 10 is provided with branches 35 and 36 extending to the electrodes 13 of intensifiers C and D for completing the negative side of the circuit.

Thus it will be seen that alternating currents produced in the wires 6 and 7 will be rectified and delivered in the form of a direct current through the line wires 9 and 10, and I find by experiment that the wires 6 and 7 should be of iron, preferably soft, and may of course be insulated, the other wiring not specified as iron being of copper or other suitable material.

In carrying out the operation as stated, the circuits may be traced as follows: A positive impulse starting at the zincs 3 is directed along conductor 7 to branch 23 to conductor 7^1 and the winding of the rectifier of intensifier B through said rectifier to the conductor 6^1, through the winding thereof to the contact 18, conductor 32 and to the line wire 9. The next or negative impulse directed along conductor 7 cannot find its way along branch 23 and the circuit just above traced because it cannot pass across the rectifier of intensifier B but instead the negative impulse passes along conductor 22 to conductor 7 of intensifier A and the winding thereof to the contact 19 and to conductor 27 to contact 18 of intensifier C, to the winding of the wire 6^1 thereof to the electrode 14 through the rectifier to the of the electrode 13 and conductor of intensifier A, electrode 14 thereof and conductor 6^1 to contact 18 and wire 31 to line wire 9. Obviously the positive impulse cannot pass along the wire 20 because of its inverse approach to the rectifier of intensifier B. The next impulse or negative impulse delivered to conductor 6 cannot pass along conductor 21 because of its connection with electrode 13 of the rectifier of intensifier A, but instead passes along conductor 20 to the wire 7^1 and its winding forming part of intensifier B to the contact 19 and conductor 29 to contact 18 and the winding of wire 6^1 of intensifier D to the electrode 14 and through the rectifier to the electrode 13 and conductor 35 to line wire 10. Thus the current is rectified and all positive impulses directed along one line and all negative impulses along the other lie s that the potential difference between the two lines will be maximum for the given current of the alternating circuit. It is, of course, apparent that a less number of intensifiers with their accompanying rectifier elements may be employed with a sacrifice of the impulses which are checked back from a lack of ability to pass the respective rectifier elements, and in fact I have secured efficient results by the use of a single intensifier with its rectifier elements, as hereinafter set forth.

Grounding conductors 37 and 38 are connected respectively with the conductors 6 and 7 and are provided with the ordinary lightning arresters 39 and 40 respectively for protecting the circuit against high tension static charges.

Conductors 41 and 42 are connected respectively with the conductors 6 and 7 and each connects with an automatic cutout 43 which is grounded as at 4. Each of said automatic cutouts is exactly like the other and one of the same is shown in detail in Figure 7 and comprises the inductive resistance 45 provided with an insulated binding post 46 wit which the respective conductor 6 or 7 is connected, said post also supporting a spring 48 which sustains an armature 49 adjacent to the core of the resistance 45. The helix of resistance 45 is connected preferably through the spring to the binding post at one end and at the other end is grounded on the core of the resistance, the said core being grounded by ground conductor 44 which extends to the metallic plate 52 embedded in moist carbon or other inductive material buried in the earth. Each of the conductors 41, 42 and 44 is of iron, and in this connection I wish it understood that where I state the specific substance I am able to verify the accuracy of the statement by the results of tests which I have made, but of course I wish to include along with such substances al equivalents, as for instance, where iron is mentioned its byproducts, such as steel, and its equivalents such as nickel and other magnetic substances are intended to be comprehended. The cutout apparatus seen in detail in Figure 7 is employed particularly for insuring against high tension currents, it being obvious from the structure shown that when potential rises beyond the limit established by the tension of the spring sustaining the armature 40, the armature will be moved to a position contacting with the core of the cutout device and thereby directly close the ground connection for

line wire 41 with conductor 44, eliminating the resistance of winding 45 and allowing the high tension current to be discharged to the ground. Immediately upon such discharge the winding 45 losing its current will allow the core to become demagnetized and release the armature 49 whereby the ground connection is substantially broken leaving only the connection through the winding 45 the resistance of which is sufficient for insuring against loss of low tension current.

In Figure 8 I have illustrated an apparatus which though apparently primitive in construction and arrangement comprehends the first successful embodiment which I produced in the course of discovery of the present invention, and it will be observed that the essential features of the invention are therein disclosed. The structure delineated in said figure consists of horseshoe magnets 54, 55, one facing north and the other south, that is, each opening in the respective directions indicated and the two being connected by an iron wire 55 which is uninsulated and wrapped about the respective magnets each end portion of the wire 55 being extended from the respective magnets to and connected with, as by being soldered to, a zinc plate 56, there being a plate 56 for each magnet and each plate being arranged longitudinally substantially parallel with the legs of the magnet and with the faces of the plate exposed toward the respective legs of the magnet, the plate being thus arranged endwise toward the north and south. An iron wire 57 connects the plates 56, the ends of the wire being preferably connected adjacent the outer ends of the plates but from experiment I find that the wire may be connected at practically any point to the plate. Lead wires 58 and 59 are connected respectively with the wires 55 and 57 and supply an alternating current at a comparatively low tension, and to control such current the wires 58 and 59 may be extended to a rectifier or combined rectifier and intensifier, as above set forth.

The tests which I have found successful with the apparatus seen in Figure 8 were carried out by the employment first of horseshoe magnets approximately 4 inches in length, the bar comprising the horseshoe being about one inch square, the zincs being dimensioned proportionately and from this apparatus with the employment of a single intensifier and rectifier, as above stated, I was able to obtain a constant current of 8 volts.

It should be obvious that the magnets forming one of the electrodes of this apparatus may be permanent or may be electromagnets, or a combination of the two.

While the magnets mentioned throughout the above may be formed of any magnetic substance, I find the best results obtained by the employment of the nickel chrome steel.

While the successful operation of the various devices which I have constructed embodying the present invention have not enabled me to arrive definitely and positively at fixed conclusion relative to the principles and theories of operation and the source from which current is supplied, I wish it to be understood that I consider myself as the first inventor of the general type hereinbefore described capable of producing commercially serviceable electricity, for which reason my claims hereinafter appended contemplate that I may utilize a wide range of equivalents so far as concerns details of construction suggested as preferably employed.

The current which I am able to obtain is dynamic in the sense that it is not static and its production is accomplished without chemical or mechanical action either incident to the actual chemical or mechanical motion or incident to changing caloric conditions so that the elimination

of necessity for the use of chemical or mechanical action is to be considered as including the elimination of the necessity for the use of heat or varying degrees thereof.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is: --- [Claims not included here]

NOTES & COMMENTS

From the Article in *Tech. World Mag*.:

1. First demo model was powerful enough to spark a gas engine.
2. Second model developed 8 volts.
3. Demo model at Patent Office was elevated on short poles.
4. The model planned to power Phoenix AZ would be elevated 200 feet.
5. The Absorber "consists of a series of magnetized steel plates set in a circle (the manner of preparing them is kept secret)".
6. "[T]he magnetizing of one set of plates... is part of the secret of the treatment which makes it respond to the accumulations of the atmosphere".

From British Patent # 1098 (1913):

"I have been able... to produce from a very small apparatus at comparatively low elevation, say about 50 or 60 feet above the earth's surface, a substantially constant current at a commercially useable voltage and amperage".

"This current... is capable of being readily increased by additions of the unit elements in the apparatus".

Fig. 1 and Fig. 2 show the magnet poles are connected N-S by a thick iron rod (thick compared to the lines used for wires in the drawings).

No angle is specified for the V-shaped zinc plates. The article (but not the patent) states that the plates are magnetized (obviously not zinc). Zinc-galvanized steel? Will a thin film of Zn work? Or, powdered Zn in a binder (more surface area)? Or, zinc-galvanized iron wire in a coil?

The Palmer Craig device (www.rexresearch.com/craig/craig.htm) is powered by the terrestrial magnetic field, and employs a thin film of bismuth to capture the energy as diamagnetism. Perhaps this can be integrated with Meyers' device.

Figure 8 (the demonstration of principle) show uninsulated iron wire being used to connect the plates and magnets. The wire is wound around the Bloch wall area of the horseshoe magnets. Perhaps Coler-type windings around the poles could be used here (See: www.rexresearch.com/coler/coler.htm). Coler used copper plates as "condensers" in his device.

Could copper plates be used for the Meyers device? Perhaps flat (Tesla non-inductive) coils could be integrated here.

"It is essential that the plates 3 be disposed substantially N and S with their flat faces approximately parallel to the adjacent faces of the co-operating magnets....

"I find that it is immaterial whether the N pole of one of the magnets is disposed to the N and the S pole to the S, or vice versa".

"[T]he magnets and zinc plates... produce electrical currents when disposed... N and S, but when disposed... E and W no such currents are produced".

"[E]levation is by no means vital, but... more efficient results are obtained by placing the zincs and magnets on elevated supports".

"The elements may be disposed in horizontal planes [or vertically]...".

The "zinc plate 56... [is] arranged longitudinally substantially parallel with the legs of the magnet and with the faces of the plate exposed toward the respective legs of the magnet, the plate being thus arranged endwise toward the north and south".

The first model used "horseshoe magnets approximately 4 inches in length, the bar comprising the horseshoe being about one inch square, the zincs being dimensioned proportionately and from this apparatus with the employment of a single intensifier and rectifier, as above stated, I was able to obtain a constant current of 8 volts... [T]he magnets... may be permanent or may be electromagnets, or a combination of the two... I find the best results obtained by... nickel chrome steel".

Comments & Questions:

The rectifier is described as a preferred embodiment, but other designs also work. The Ed Gray capacitor design comes to mind (www.rexresearch.com/evgray/1gray.htm). The Tate Ambient Power Module also might apply (www.rexresearch/tate/tate.htm).

Would non-ferrous magnets work? Is there a frequency involved (oscilloscope tests)? Coler found that ferromagnetism has a resonant frequency about 180 KHz. Can the components be made adjustable for RLC-resonance?

N° 1098 A.D. 1913

Date of Application, 14th Jan., 1913—Accepted, 14th Jan., 1914

COMPLETE SPECIFICATION.

Improvements in and relating to Apparatus for Producing Electricity.

I, ROY JEROME MEYERS, of Hotel Altamont, Baltimore, in the State of Maryland, United States of America, Electrician, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in apparatus for the production of electrical currents, and the primary object in view is the production of a commercially serviceable electrical current without the employment of mechanical or chemical action. To this end the invention comprises means for producing what I believe to be dynamic electricity from the earth and its ambient elements.

I am, of course, aware that it has been proposed to obtain static charges from upper strata of the atmosphere, but such charges are recognized as of widely variant potential and have thus far proved of no practical commercial value, and the present invention is distinguished from all such apparatus as has heretofore been employed for attracting static charges by the fact that this improved apparatus is not designed or employed to produce or generate irregular, fluctuating or other electrical charges which lack constancy, but on the other hand I have by actual test been able to produce from a very small apparatus at comparatively low elevation, say about fifty or sixty feet above the earth's surface, a substantially constant current at a commercially usable voltage and amperage. This current I ascertained by repeated tests is capable of being readily increased by additions of the unit elements in the apparatus hereinafter set forth, and I am convinced from the constancy of the current obtained and its comparatively low potential that the current is dynamic and not static, although, of course, it is not impossible that certain static discharges occur and, in fact, I have found occasion to provide against the damage which might result from such discharge by the provision of lightning arresters and cut-out apparatus which assist in rendering the obtained current stable by eliminating sudden fluctuations which sometimes occur during conditions of high humidity from what I consider static discharges. The nature of my invention is obviously such that I have been unable to establish authoritatively all of the principles involved, and some of the theories herein expressed may possibly prove erroneous, but I do know and am able to demonstrate that the apparatus which I have discovered does produce, generate, or otherwise acquire a difference of potential representing a current value which is commercially serviceable and may be delivered at the voltage and amperage above stated, or varied therefrom at the will of the operator according to the uses to which the current is to be subjected.

The invention comprises generically means for producing electrical currents of serviceable potential substantially without the employment of mechanical or chemical action, and in this connection I have been able to observe no chemical action whatever on the parts utilized although deterioration may possibly occur in some of the parts, but so far as I am able to determine such deterioration does not add to the current supply but is merely incidental to the effect of climatic action.

The invention more specifically comprises the employment of a magnet or

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magnets and a co-operating element, such as zinc disposed adjacent to the magnet or magnets and connected in such manner and arranged relative to the earth so as to produce current, my observation being that current is produced only when such magnets have their poles facing substantially to the north and south and the zincs are disposed substantially along the magnets.

The invention also comprehends other details of construction, combinations and arrangements of parts as will hereinafter be fully set forth and claimed.

In the accompanying drawings:

Figure 1 is a top plan view of an apparatus embodying the features of the present invention, the arrow accompanying the figure indicating substantially the geographical north, parts of the figure being diagrammatic for condensing the showing.

Figure 2 is a view in side elevation of the parts seen in plan in Figure 1.

Figure 3 is a vertical section taken on the plane indicated by the line 3—3 of Figure 2 and looking in the direction indicated by the arrow.

Figure 4 is a detail view partly in elevation and partly in section showing the detail connections of the converter and intensifier.

Figure 5 is a transverse section taken on the planes indicated by line 5—5 of Figure 4 and looking downwardly.

Figure 6 is an enlarged detail fragmentary section illustrating the parts at the juncture of the conductors and one of the intensifiers.

Figure 7 is an enlarged detail view partly in elevation and partly in section of one of the automatic cut-outs and

Figure 8 is a diagrammatic view of one of the simplest forms of embodiments of the invention.

Referring to the drawing by numerals, 1, 1 indicates magnets connected by a magnetic substance 2, preferably an iron wire. The magnets 1 are arranged in pairs, one pair being spaced beneath the other, and interposed between the magnets are zinc plates 3, 3 connected by an iron wire conductor 4. Suitable insulating supports 5 are arranged for sustaining the respective magnets 1 and plates 3, 3. Each plate 3 is preferably bent substantially into V form, as clearly seen in Figure 1, and the V of one of the plates opens or faces toward the north and the V of the other plate to the south. I have determined by experimentation that it is essential that the plates 3 be disposed substantially north and south with their flat faces approximately parallel to the adjacent faces of the co-operating magnets, although by experience I have not discovered any material difference in the current obtained when the plates are disposed slightly to one side of north and south, as for instance when disposed in the line of the magnetic polarity of the earth. The same is true with respect to the magnets 1, the said magnets being disposed substantially north and south for operative purposes, although I find that it is immaterial whether the north pole of one of the magnets is disposed to the north and the south pole to the south, or *vice versa*, and it is my conviction from experience that it is essential to have the magnets of each pair connected by magnetic material so that the magnets substantially become one with a pole exposed to the north and a pole exposed to the south. In Figure 1, I have indicated in full lines by the letters S and N the respective polarities of the magnets 1, and have indicated in dotted lines the other poles of those magnets when the connection 2 is severed. I have found that the magnets and zinc plates operate to produce, whether by collection or generation I am not certain, electrical currents when disposed substantially north and south, but when disposed substantially east and west no such currents are produced. I also find that the question of elevation is by no means vital, but it is true that more efficient results are obtained by placing the zincs and magnets on elevated supports. I furthermore find from tests that it is possible to obtain currents from the apparatus with the zincs and magnets disposed in a building or otherwise enclosed, although more efficient results are obtained by having the said elements arranged in the open.

While in Figures 1, 2 and 3, I have shown the magnets and the zinc plates as superimposed, it will be apparent, as hereinafter fully set forth, that these elements may be juxtaposed in horizontal planes, and substantially the same results will be secured. Furthermore, the magnets 1 with the interposed zincs 3, as shown in Figures 1, 2 and 3 merely represent a unit which may be repeated either horizontally or vertically for increasing the current supply, and when the unit is repeated the zinc plates are arranged alternating with the magnets throughout the entire series as hereinafter indicated.

A conductor 6 is connected in multiple with the conductors 2 and a conductor 7 is connected with conductor 4, the conductor 6 extending to one terminal of a rectifier which I have indicated by the general reference character 8, and the conductor 7 extending to the other terminal of said rectifier. The rectifier as seen in diagram in Figure 1 may assume any of several well known embodiments of the electrical valve type and may consist of four assymmetric cells or Cooper-Hewitt mercury vapor lamps connected as indicated in Figure 1 for permitting communication of the positive impulses from conductor 7 only to the line conductor 9 and the negative impulses from the conductor 7 only to the line conductor 10, and permitting the positive impulses from the conductor 6 only to the line conductor 9 and the negative impulses from conductor 6 only to the line conductor 10. The current from this rectifier may be delivered through the conductors 9 and 10 to any suitable source for consumption.

While the said rectifier 8 may consist of any of the known types, as above outlined, it preferably consists of a specially constructed rectifier which also has the capacity of intensifying the current and comprises specifically the elements shown in detail in Figures 4, 5 and 6 wherein I have disclosed the detail wiring of the rectifier when composed of four of the rectifying and intensifying elements instead of assymmetric cells or simple mercury vapor valves. As each of these structures is an exact embodiment of all the others, one only will be described, and the description will apply to all. The rectifying element of each construction consists of a mercury tube 11 which is preferably formed of copper but may be formed of glass or other suitable material, and comprises a cylinder having its end portions tapered and each terminating in an insulating plug or stopper 12. Through the upper stopper 12 is extended the electrode 13 which extends well into the tube and preferably substantially one-half the length thereof to a point adjacent the inner end of an opposing electrode 14 which latter electrode extends thence downwardly through the insulation 12 at the lower end of the tube. The tube 11 is supplied with mercury and is adapted to operate on the principle of the mercury vapor lamp, serving to rectify current by checking back impulses of one sign and permitting passage of impulses of the other. To avoid the necessity for utilizing a starter, as is common with the lamp type of electrical valve, the supply of mercury within the tube may be sufficient to contact with the lower end of the electrode 13 when current is not being supplied, so that as soon as current is passed from one electrode to the other sufficiently for volatilizing that portion of the mercury immediately adjacent the lower end of electrode 13, the structure begins its operation as a rectifier. The tube 11 is surrounded by a tube 15 which is preferably spaced from tube 11 sufficiently for allowing atmospheric or other cooling circulation to pass the tube 11. In some instances, it may be desirable to cool the tube 11 by a surrounding body of liquid, as hereinafter indicated. The tube 15 may be of insulating material but I find efficient results attained by the employment of a steel tube, and fixed to the ends of the tube are insulating disks 16, 16 forming a spool on which are wound twin wires 6^1 and 7^1, the wire 6^1 being connected at the inner helix of the coil with the outer end of the electrode 14, the lower portion of said electrode being extended to one side of the tube 11 and passed through an insulating sleeve 17 extending through the tube 15, and at its outer end merging into the adjacent end of the wire 6^1. The wire 7^1 extends directly from the outer portion of the spool through the

several helices to a point adjacent the juncture of the electrode 14 with wire 6^1 and thence extends in mechanical parallelism with the wire throughout the coil, the wire 6^1 ending in a terminal 18 and the wire 7^1 ending in a terminal 19. For the sake of convenience of description and of tracing the circuits, each of the apparatus just above described and herein known as an intensifier and rectifier will be mentioned as A, B, C and D, respectively. Conductor 6 is formed with branches 20 and 21 and conductor 7 is formed with similar branches 22 and 23. Branch 20 from conductor 6 connects with conductor 7^1 of intensifier B and branch 21 of conductor 6 connects with the conductor 7^1 of intensifier C, while branch 22 of conductor 7 connects with conductor 7^1 of intensifier A and branch 23 of conductor 7 connects with conductor 7^1 of intensifier D. A conductor 27 is connected with terminal 19 of intensifier A and extends to and is connected with terminal 18 of intensifier C, and a conductor 28 is connected with the terminal 19 of intensifier C and extends to and is connected with electrode 13 of intensifier A. A conductor 29 extends from the terminal 19 of intensifier B to the terminal 18 of intensifier D and a conductor 30 extends from the terminal 19 of intensifier D to electrode 13 of intensifier B. Each electrode 13 is supported on a spider 13^1 resting on the upper disk 16 of the respective intensifier. Conductors 31 and 32 are connected with the terminals 18 of intensifiers A and B and are united to form the positive line wire 9 which co-operates with the negative line wire 10 and extends to any suitable point of consumption. The line wire 10 is provided with branches 35 and 36 extending to the electrodes 13 of intensifiers C and D for completing the negative side of the circuit.

Thus it will be seen that alternating currents produced in the wires 6 and 7 will be rectified and delivered in the form of a direct current through the line wires 9 and 10, and I find by experiment that the wires 6 and 7 should be of iron, preferably soft, and may of course be insulated, the other wiring not specified as iron being of copper or other suitable material.

In carrying out the operation as stated, the circuits may be traced as follows: A positive impulse starting at the zincs 3 is directed along conductor 7 to branch 23 to conductor 7^1 and the winding of intensifier D to terminal 19 through conductor 30 to electrode 13 of the rectifier of intensifier B through said rectifier to the conductor 6^1, through the winding thereof to the contact 18, conductor 32 and to the line wire 9. The next or negative impulse directed along conductor 7 cannot find its way along branch 23 and the circuit just above traced because it cannot pass across the rectifier of intensifier B but instead the negative impulse passes along conductor 22 to conductor 7 of intensifier A and the winding thereof to the contact 19 to conductor 27 to contact 18 of intensifier C, to the winding of the wire 6^1 thereof to the electrode 14 through the rectifier to the electrode 13 and conductor 36 to the line wire 10. A positive impulse delivered to wire 6 passes along the said wire to the branch 21 to the conductor 7^1 of intensifier C and the winding thereof to the contact 19, conductor 28, electrode 13 of the rectifier of intensifier A, electrode 14 thereof and conductor 6^1 to contact 18 and wire 31 to line wire 9. Obviously the positive impulse cannot pass along the wire 20 because of its inverse approach to the rectifier of intensifier B. The next impulse or negative impulse delivered to conductor 6 cannot pass along conductor 21 because of its connection with electrode 13 of the rectifier of intensifier A, but instead passes along conductor 20 to the wire 7^1 and its winding forming part of intensifier B to the contact 19 and conductor 29 to contact 18 and the winding of wire 6^1 of intensifier D to the electrode 14 and through the rectifier to the electrode 13 and conductor 35 to line wire 10. Thus the current is rectified and all positive impulses directed along one line and all negative impulses along the other line so that the potential difference between the two lines will be maximum for the given current of the alternating circuit. It is, of course, apparent that a less number of intensifiers with their accompanying rectifier elements may be

employed with a sacrifice of the impulses which are checked back from a lack of ability to pass the respective rectifier elements, and in fact I have secured efficient results by the use of a single intensifier with its rectifier elements, as hereinafter set forth.

Grounding conductors 37 and 38 are connected respectively with the conductors 6 and 7 and are provided with the ordinary lightning arresters 39 and 40 respectively for protecting the circuit against high tension static charges.

Conductors 41 and 42 are connected respectively with the conductors 6 and 7 and each connects with an automatic cut-out 43 which is grounded as at 44. Each of said automatic cut-outs is exactly like the other and one of the same is shown in detail in Figure 7 and comprises the inductive resistance 45 provided with an insulated binding post 46 with which the respective conductor 6 or 7 is connected, said post also supporting a spring 48 which sustains an armature 49 adjacent the core of the resistance 45. The helix of resistance 45 is connected preferably through the spring to the binding post at one end and at the other end is grounded on the core of the resistance, the said core being grounded by ground conductor 44 which extends to the metallic plate 52 imbedded in moist carbon or other inductive material 53 buried in the earth. Each of the conductors 41, 42 and 44 is of iron, and in this connection I wish it understood that where I state the specific substance I am able to verify the accuracy of the statement by the results of tests which I have made, but of course I wish to include along with such substance all equivalents, as for instance, where iron is mentioned its by-products, such as steel, and its equivalents such as nicked and other magnetic substances are intended to be comprehended. The cut-out apparatus seen in detail in Figure 7 is employed particularly for insuring against high tension currents it being obvious from the structure shown that when potential rises beyond the limit established by the tension of the spring sustaining the armature 49, the armature will be moved to a position contacting with the core of the cut-out device and thereby directly close the ground connection for line wire 41 with conductor 44, eliminating the resistance of winding 45 and allowing the high tension current to be discharged to the ground. Immediately upon such discharge the winding 45 losing its current will allow the core to become demagnetized and release the armature 49 whereby the ground connection is substantially broken leaving only the connection through the winding 45 the resistance of which is sufficient for insuring against loss of low tension current.

In Figure 8 I have illustrated an apparatus which though apparently primitive in construction and arrangement comprehends the first successful embodiment which I produced in the course of the discovery of the present invention, and it will be observed that the essential features of the invention are therein disclosed. The structure delineated in said figure consists of horse shoe magnets 54, 54, one facing north and the other south, that is, each opening in the respective directions indicated and the two being connected by an iron wire 55 which is uninsulated and wrapped about the respective magnets at or adjacent the neutral zone thereof, and the wire 55 is preferably soldered to the respective magnets each end portion of the wire 55 being extended from the respective magnet to and connected with, as by being soldered to, a zinc plate 56, there being a plate 56 for each magnet and each plate being arranged longitudinally substantially parallel with the legs of the magnet and with the faces of the plate exposed toward the respective legs of the magnet, the plate being thus arranged endwise toward the north and south. An iron wire 57 connects the plates 56, the ends of the wire being preferably connected adjacent the outer ends of the plates but from experiment I find that the wire may be connected at practically any point to the plate. Lead wires 58 and 59 are connected respectively with the wires 55 and 57 and supply an alternating current ordinarily at a comparatively low tension, and to control such current the wires 58 and 59 may be extended to a rectifier or combined rectifier and intensifier, as above set forth.

The tests which I have found successful with the apparatus seen in Figure 8 were carried out by the employment first of horse shoe magnets approximately four inches in length, the bar comprising the horse shoe being about one inch square, the zincs being dimensioned proportionately and from this apparatus with the employment of a single intensifier and rectifier, as above stated, I was able to obtain a constant current of 8 volts.

It should be obvious that the magnets forming one of the electrodes of this apparatus may be permanent or may be electro-magnets, or a combination of the two.

While the magnets mentioned throughout the above may be formed of any magnetic substance, I find the best results obtained by the employment of the nickel chrome steel.

While the successful operation of the various devices which I have constructed embodying the present invention have not enabled me to arrive definitely and positively at fixed conclusions relative to the principles and theories of operation and the source from which current is supplied, I wish it to be understood that I consider myself as the first inventor of an apparatus of the general type hereinbefore described capable of producing commercially serviceable electricity, for which reason my claims hereinafter appended contemplate that I may utilize a wide range of equivalents so far as concerns details of construction suggested as preferably employed.

The current which I am able to obtain is dynamic in the sense that it is not static and its production is accomplished without chemical or mechanical action either incident to the actual chemical or mechanical motion or incident to changing calorific conditions so that the elimination of necessity for the use of chemical or mechanical action is to be considered as including the elimination of the necessity for the use of heat or varying degrees thereof.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. Means for producing dynamic electricity without mechanical or chemical action.

2. Electricity producing means as claimed in Claim 1, characterized in that said means is capable of producing low tension current.

3. Electricity producing means as claimed in Claim 1, characterized in that said means comprises a magnet, and means co-operating with the latter.

4. Means as set forth in Claim 3, characterized in that the parts are stationary.

5. Means as claimed in Claim 3, characterized in that the magnet is disposed substantially north and south.

6. Means as claimed in Claims 1, 3 and 5, wherein the means coacting with the magnet is a metal and said parts are disposed substantially north and south.

7. Means as claimed in Claims 1, 3 and 6, in which the metal is zinc, and combined with conductors connected with the co-operating parts to deliver current therefrom.

8. Means as set forth in Claim 1, characterized in that said means comprises spaced magnets with an adjacent co-operating zinc, and an iron wire connecting the magnets, and means to deliver electrical current from said parts.

9. Means as set forth in Claim 8, characterized in that the current delivery means comprises an intensifier and rectifier.

10. Means as set forth in Claim 8, characterized in that the current delivery means comprises wires connected with the magnets and zinc, an electrical valve connected with one of said wires, and independent helices surrounding said valve, one of said helices being connected with the terminal of the valve at the opposite side from the contact of said wire and the other of said helices being connected with the other wire, the electrical valve comprising a mercury vapor rectifier.

11. The process of producing electricity comprising exposing a magnet and

co-operating means disposed substantially north and south and taking off current therefrom.

12. The process of producing electricity comprising disposing stationary elements in co-operative relation in respect to each other and with respect to the earth for giving off relatively low tension electrical current, substantially without chemical action.

13. Electricity producing means constructed and operating substantially as described with reference to the accompanying drawings.

Dated this 13th day of January, 1913.

W. P. THOMPSON & Co.,
6, Lord Street, Liverpool, and at
Bradford & London,
Agents for the Applicant.

Reference has been directed, in pursuance of Section 7, Sub-section 4, of the Patents and Designs Act, 1907, to Specifications No. 16,709 of 1887, No. 14,033 of 1899, No. 15,412 of 1906, and No. 5457 of 1911.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1914.

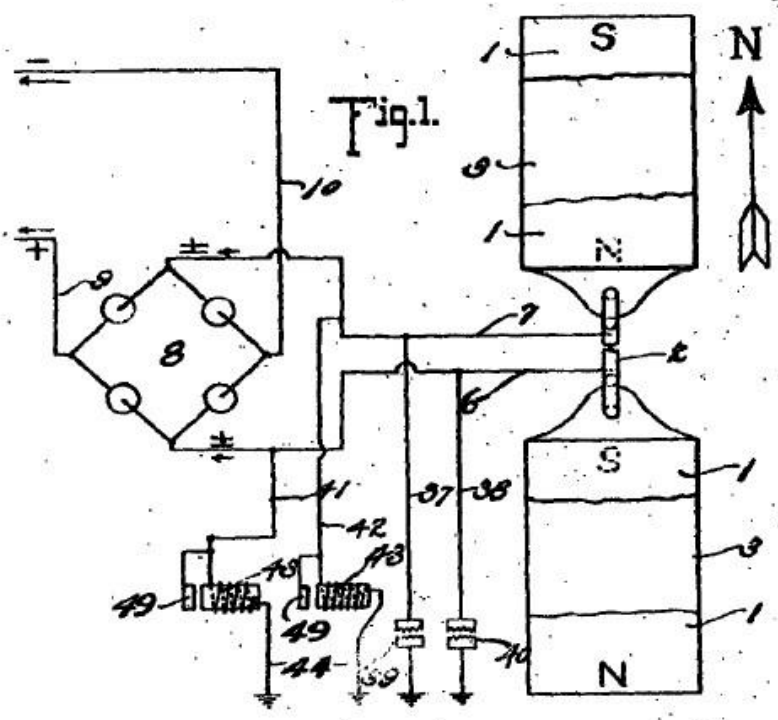


Fig.1.

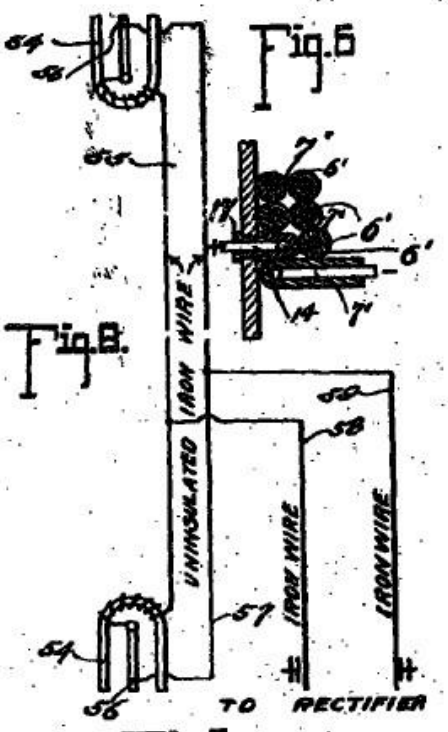


Fig.6.

Fig.8.

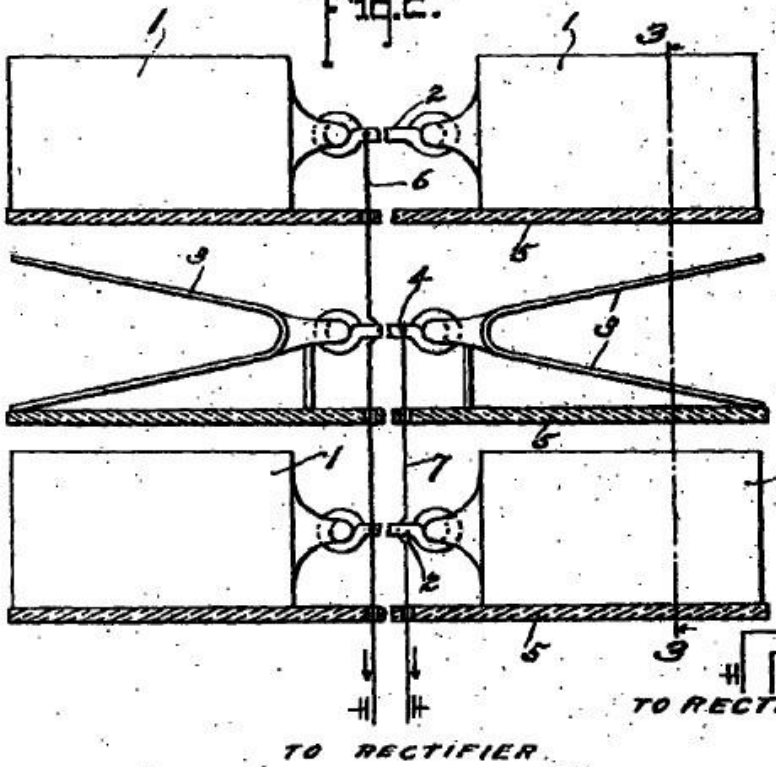


Fig.2.

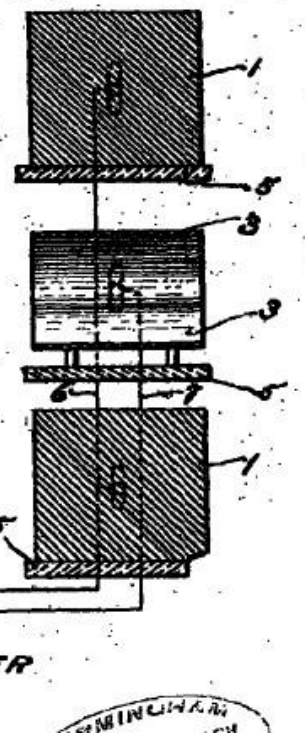
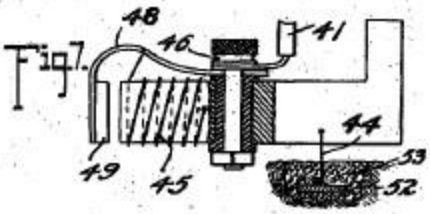
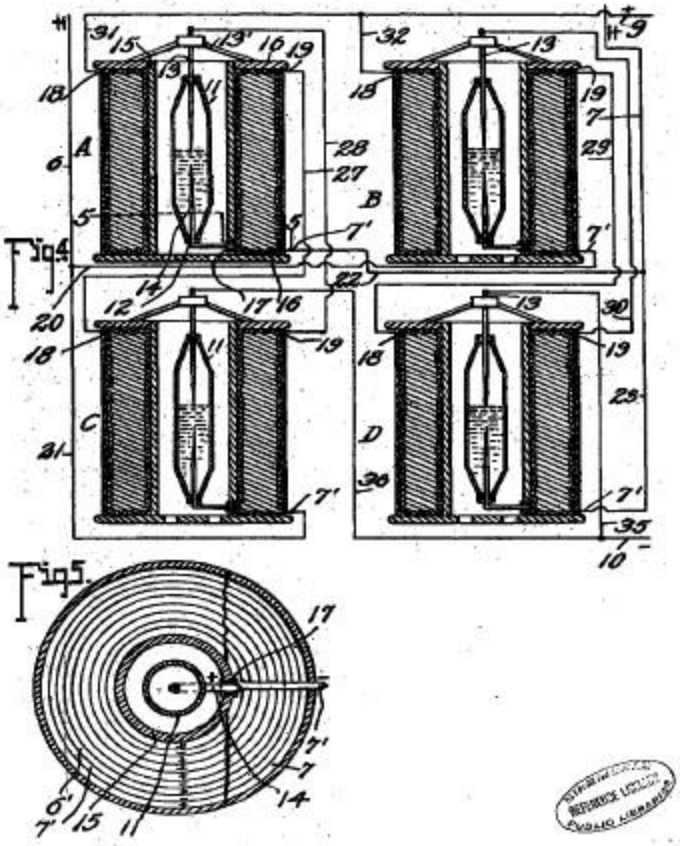


Fig.5.





Veljko MILKOVIC

Two-Stage Oscillator

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A simple mechanical system that produces 9:1 over-unity and antigravity

(The following information is adapted from V. Milkovic's website:
http://www.veljkomilkovic.com)

BIOGRAPHY

Veljko Milkovic was born in 1949 in Subotica (Serbia), and since 1952 he has been living in Novi Sad (Serbia), where he finished secondary school and studied History. Apart from being interested in past events, he is also a researcher, an inventor, an innovator and a writer. Furthermore, he works on futuristic projects. So far he has got around 110 inventions and has designed 36 approved patents, some of which have been in use for years. Moreover, he has received many domestic and international awards for his work spanning over many decades.

He invented a self-heating eco-house and a number of ecological innovations, which also have been in use for a long time. According to his drawings, many such eco-houses have been built in Novi Sad, Sombor, Zajecar, Ljig (Serbia)... He has taken part in about 30 scientific gatherings in the field of energetics and ecology as well as many projects concerning scientific research.

He is the president of the Department for ecological innovations and the organiser of the Exhibition of ecological innovations with VRELO Society from Novi Sad. He is also a member of the Association for the popularisation of science - Novi Sad.

Among various domestic and international awards, he has received November charter of the city of Novi Sad in 2002 for the remarkable contribution in the field of ecology and energetic as well as in 2002 a gold medal of Novi Sad fair for the invention hand water pump with pendulum.

He is very familiar with Petrovaradin fortress (city of Novi Sad, Serbia); he has been exploring it since 1960. In 1965 he managed to decipher orientation marks at the crossroads and establish the logic of subterranean labyrinth with "^", "Y" and "T" crossroads. This approach helps him to examine the 20km deep undergrounds of the fortress in a faster and safer manner.

His engineering and ecological projects inspired by Petrovaradin fortress are in practice: "Selfheating ecological house", "Mushroom garden and greenhouse with reflecting surfaces" (mushroom gardens for growing bukovace near Cenej and Petrovaradin, Serbia, were built), Project "Forests for food production" (in use on several locations in the province of Vojvodina, Serbia and Montenegro) and "Autonomous battery charger".

In 1975, librarian Srenko Drk hired him as a guide for less known parts of the fortress especially subterranean military galleries.

Novi Sad museum awarded him with the letter of thanks for the "ardent contribution in research of the Petrovaradin fortress".

In the late 70's, as a member of scientific and technical editorial board of the Cultural Center in Novi Sad, he organized and lectured at panels about Petrovaradin fortress. Some of the participants were an academician and a professor Bogdan Brukner and a professor Milan Vranic.

An idea of a modern sod house as a new way of living gave him élan to continue with researching subterranean galleries.

In 1983, Veljko Milkovic and Mr. Srenko Drk founded "The club of friends of Petrovaradin fortress" within "Vladimir Nazor" library in Petrovaradin (Serbia).

In 1997 he announced the book entitled "Mysteries of Petrovaradin fortress", which was published as a feuilleton, a script and a book. That was the first time that the gap in the literature about Petrovaradin fortress and its underground has been filled. It is interesting that many journalists and authors like Mr. Živko Markovic, a historian, claimed that subterranean military galleries represent the largest attraction in Petrovaradin.

In his numerous lectures and during short excursions he talked about dangers, but also about great tourist potential of Petrovaradin, Fruška Gora, Srem (Serbia) and the central part of the (river) Danube-basin.

During public appearances in previous years, Veljko Milkovic announced major archaeological discoveries from Palaeolithic age at the location of Petrovaradin fortress and in the central Danube basin. Experienced archaeologists stated that "it is beyond dreams" and that it was "absolutely unexpected"...

But it happened and it was confirmed by the latest archaeological discoveries from Palaeolithic age. In his numerous public appearances, Milkovic claimed that the central Danube basin is a cradle of prehistoric period, which was confirmed by the recent discoveries by European scientists. He is also in possession of a unique and unusual archaeological collection. He also gathered numerous minerals and fossils, from the Danube-basin, as well as remains of previous civilisations.

In his research study he worked hard on gravitation phenomenon and also on the improvement of anti-gravitational experiments and, connected to that, anti-gravitational operating systems.

In the last few years he has been working in the field of single and double mechanical oscillations, which represent a new source of widely, used energy, based on which he has 22 approved patents. His present aim is to explore and use practically the potentials of double oscillations and, in connection to that, a new source of energy based on inertial forces and gravitational potential.

Among other things in his experiments, he managed to get 12 times more output energy than input energy. In last 10 years, no one argumentatively disputed research and measurings carried out by Milkovic. Through such achievements, Veljko Milkovic laid the path for new challenges in physics in the 21st century, which could be the forerunner of the new great scientific revolution.

Milkovic is in possession of numerous prototypes and models (photo & video), as well as ideas for various machines and devices. Over the years, Milkovic received many positive comments and opinions relating to his research from domestic and foreign physicists, professors, academicians, engineers, researchers etc. It is more and more definite that Milkovic's inventions can be used for production of numerous practical devices, thus creating a range of new products which could help in improvement of overall economical situation and better the situation in society.

So far he has published the following books:

"*Solarne zemunice - dom budunosti*" ("Solar sod houses - the house of the future"), (1983),
"*Ekološke kue*" ("Ecological houses"), (1991 - printed in four unedited editions),
"*Šume za proizvodnju hrane - zamena za njive*" ("Forests for food production"), 1992 (translated into Esperanto the same year),
"*Ka antigravitaciji - kompaktna vozila*" ("Towards anti-gravitation compact vehicles"), (1994),
"*Antigravitacioni motor*" ("Anti-gravity motor"), (1996 - with translation into English),
"*Perpetuum mobile*" ("Perpetuum mobile"), (2001),
"*Petrovaradin kroz legendu i stvarnost*" ("Petrovaradin through legend and reality"), (2001),
"*Petrovaradin i Srem - misterija prošlostit*" ("Petrovaradin and Srem - mystery of the past"), (2003),
"*Svet misterija - novi pogledi*" ("The world of mysteries new views"), (2004),
"*Petrovaradinska tvrava - podzemlje i nadzemlje*" ("Petrovaradin fortress over and underground"), (2005) and
"*Novi turistiki potencijali*" ("New tourist potentials"), (2006).

Milkovic also published noticeable feuilletons and notes:

"Niskoenergetski život" ("Low-energy life"), 1996.
"Energetski potencijal re?nog zaliva" ("Energetic potential of the river bay") 1996.
"Prethodna civilizacija" ("Previous civilisation"), 1999.
"Misterije Petrovaradinske tvrave" ("Mysteries of Petrovaradin fortress"), 1999.
"Petrovaradinska tvrava izme?u legende i stvarnosti" ("Petrovaradin fortress between legend and reality"), 1999.
"Nestale civilizacije" ("Missing civilisations"), 2000.

His book have been accepted both in domestic and foreign prestigious libraries, such as the Library of Congress, Washington DC and his publications can be found in the British Library in London, Moscow Library and Library of Alexandria. His publication have also been quoted in many Internet encyclopaedias and other sources.

He also found the solution how to lessen the problem of the "endangered inventor" and needs to make his secret public. That is exactly what Veljko Milkovi? is doing by publishing his books and publications.

Books: http://www.veljkomilkovic.com/KnjigeEng.html#antigravitaciji

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HAND WATER PUMP WITH A PENDULUM
(Patent - YU 49002 B)

CONTINUOUS PUMPING OF WATER WITH A LITTLE FINGER

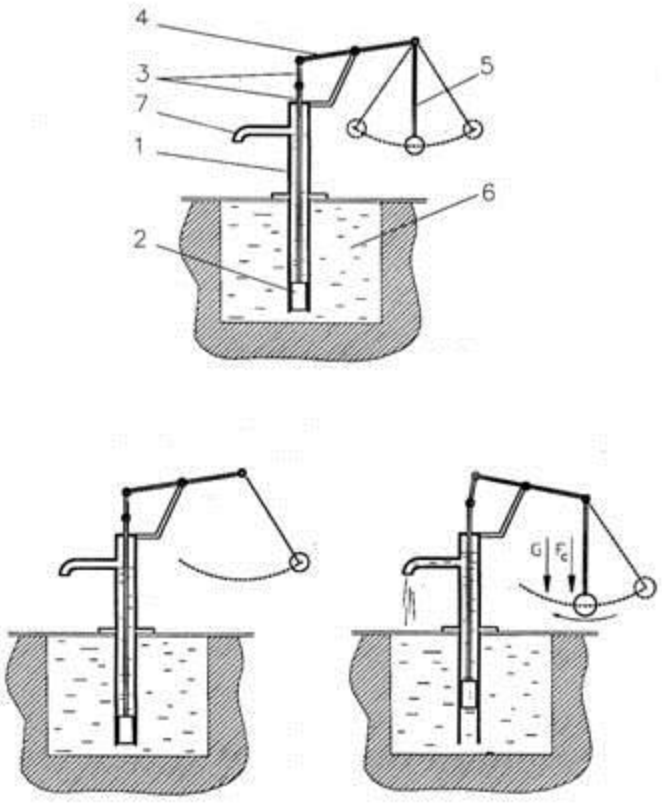
ENORMOUS EFFICIENCY CONCERNING THE INPUT OF ENERGY - UP TO A 1000 LITRES OF WATER PER HOUR WITHOUT A MAJOR EFFORT

Picture 1 **---** Public presentation of the hand water pump with a pendulum during the Agricultural Fair in Novi Sad (Serbia), 2003. The invention won a gold medal during the 2002 fair.

New and technically original idea - hand water pump with a pendulum - provides alleviation of work, because it is enough to move the pendulum occasionally with a little finger to pump the water, instead of large swings. Using the minimum of human strength in comparison to present classic hand water pumps enables efficient application in irrigation of smaller lots, for water-wells and extinguishing fires even by old people and children, which was proved by a large number of interested future consumers during the presentations.

Hand water pump with a pendulum is a realisation of a new, original, and even unbelievable, by very simple solution for pumping water. Work is alleviated because easier, long-lasting and effortless use of the hand water pump has been enabled. Input energy for starting the process of pumping, in form of occasional pushing of the pendulum, is much less than with typical hand pumps.

Picture 2 ---Hand water pump with a pendulum for pumping water out from wells or reservoirs consists of a cylinder (1) with a piston (2), lever system (3), a seesaw (4), a pendulum (5), a reservoir (6) and output water pipe (7).



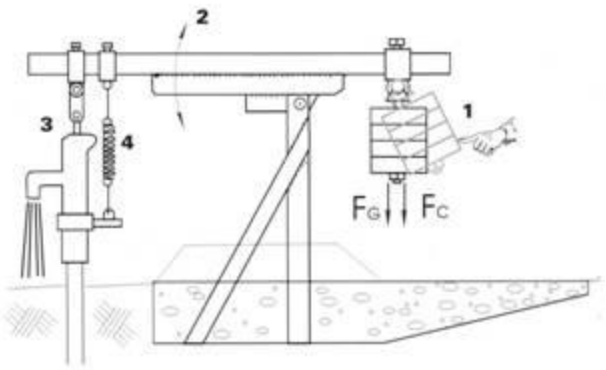
To get the water running out of the pump, the pendulum needs to be out of balance. After that, based on gravitational potential, the piston starts oscillating and the continuous stream of water is coming out of the output pipe. The pendulum should be occasionally pushed, to maintain the amplitude i.e. the stream of water.

The pump works well with all sizes of the pendulum, but mainly with the amplitude of 90°.

The advantage of this invention compared to present hand pump solutions are: less force to start the pump, less water consumption, both arms can be used to fetch the water.

The invention is applicable on other devices that use lever mechanisms, such as a hand press etc.

Picture 3 --- Side view of the pump and the position of the piston, lever and the pendulum during operation of the pump.



It is possible to pump out a 1000 litres of water per hour, without any fatigue and continue with the pumping. Both arms are free for fetching water, and both elderly and children can use it, since maintaining the oscillation of the pendulum does not request any special training or dexterity.

Whereas typical hand pumps require significant effort and an average person can use the pump continuously only for several minutes, the hand water pump needs the minimum of the effort, because it is only necessary to swing the pendulum and maintain the oscillation for several hours, without any fatigue.

All details on the hand water pump with a pendulum and the information can be provided by the author, Veljko Milkovic, who is willing for any form of cooperation with all potential strategic partners and customers for production and application. So far, there was a lot of interest for the application of the hand water pump with a pendulum both in domestic and foreign markets, as well as for further development of the product.

Experiments: 12:1 Over-Unity from 2-Stage Oscillators

During the last few years, Veljko Milkovic did several measurings, which showed the energetic excess, 12 times larger than the input. That means that two-stage oscillations (http://www.veljkomilkovic.com/OscilacijeEng.html) provide around 12 times more than the input.

Measurings were various. Regarding the camshaft mechanism and forces made with piston mechanisms, etc.

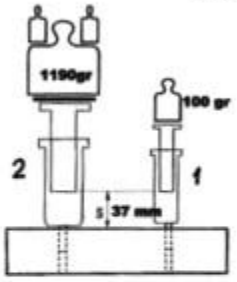
Of course, mistakes are possible, whether smaller or bigger. This is not strange in physics. It is also possible to improve devices. The main thing is to determine the correct frequencies as well as relations.

Major improvements are possible, which would compensate possible mistakes during the measuring.

You can also see the description of the research of two-stage mechanical oscillations, as well the prototypes and models with which these measurements were conducted:

Veljko Milković

COEFFICIENT OF PERFORMANCE OF THE DOUBLE LEVEL OSCILLATOR - MECHANICAL HAMMER

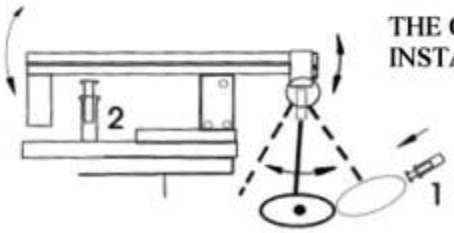


TIME OF SINKING (~2 min) IS EQUALIZED FOR BOTH PISTONS 1 AND 2

1) F = 1 N

2) F = 11.9 N

A= F x s



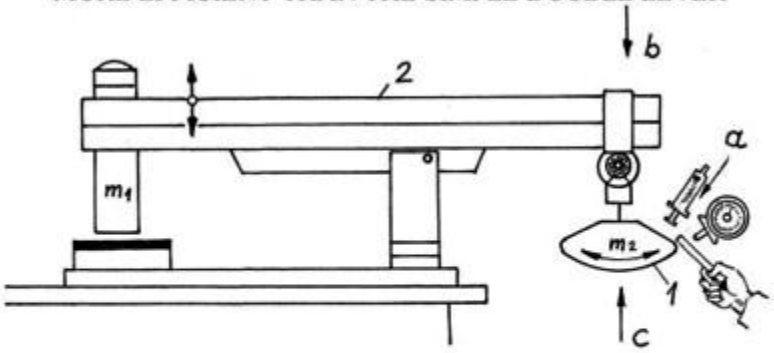
THE OSCILLATIONS (1) ARE ALMOST INSTANTANEOUSLY MAINTAINED

THE COVERED DISTANCE IS 37 mm FOR BOTH PISTONS

1) INVESTED ENERGY=0.037 J
2) GENERATED ENERGY=0.4403 J

IT CAN BE ESTIMATED THAT η=11.9 OR 1190%

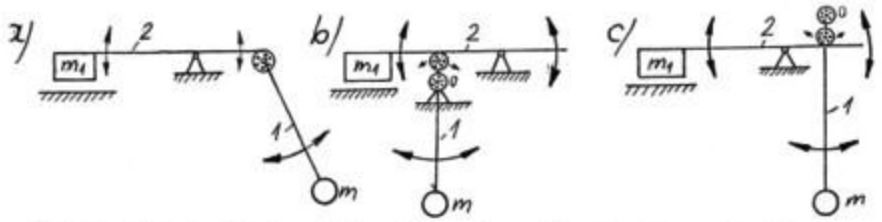
MORE EFFICIENT THAN THE SIMPLE DOUBLE LEVER



a) Minimal changes on the measuring tools (piston, force measuring instrument, spring-plate etc.) while maintaining the oscillations of the pendulum (1).

b i c) There is almost no movement of the double lever (2) even though the measuring tools are maximally loaded during the hits or pushes

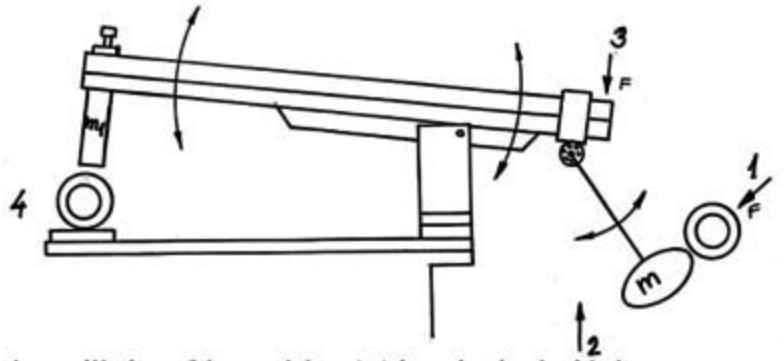
MORE EFFICIENT THAN CAM MECHANISM



START : The physical pendulum (1) is elevated into horizontal position equally for all three version (staring amplitude ~180°)

Number of hits of the double lever with m1		Duration of the pendulum's energy min	sec	Deformation of the sponge min	sec
a	78	19 min	08 sec	19 min	22 sec
b	21	1 min	20 sec	–	40 sec
c	37	1 min	49 sec	–	51 sec

MEASUREMENT WITH SPONGE-PIPE



1/ When the oscillation of the pendulum (m) is maintained with the sponge-pipe (1) there it is not deformed significantly, but the sponge-pipe (4) on the left side of the double lever with m1 is maximally deformed

2 ; 3/ When the right side of the lever is pushed with the sponge-pipe from the bottom or top position while the double-lever is resting, then the deformation of sponge-pipe (4) is insignificant but the sponge-pipe (1) is maximally deformed

Measurements using an oscilloscope have been performed recently. Dynamo flashlights have also been used. One handheld dynamo flashlight was used to push a pendulum in peak position to maintain the oscillation of the pendulum and the other dynamo flashlight was positioned under the lever on the output part of the oscillator.

Measuring was performed and voltage values were acquired for the dynamo flashlight used for maintaining the oscillation of the pendulum and the one pressed by the lever during oscillations:

Dynamo flashight analysis (200 KB; PDF --- in English):
http://www.veljkomilkovic.com/Images/Analysis_of_the_dynamo_lamp.pdf

Measurement with an oscilloscope (514 KB; PDF):
http://www.veljkomilkovic.com/Images/Measurement_with_oscilloscope.pdf

An official measurement was also conducted in cooperation with the Institute for energetics, electronics and telecommunications in Novi Sad (University of Novi Sad, Serbia). The same dynamo flashlight were also used (one was used to push the pendulum in peak position to maintain the oscillation of the pendulum and the other one was positioned above the lever on the output part of the oscillator) and the following values were acquired: ...

http://www.veljkomilkovic.com/Images/Results_of_official_electric_measurement.pdf

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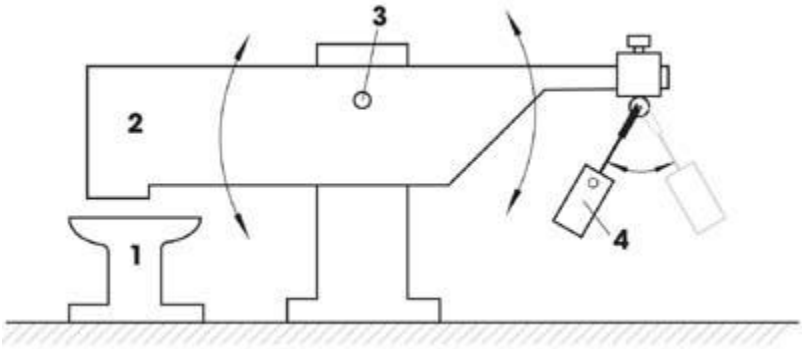
ABSTRACT

RESEARCH OF TWO-STAGE MECHANICAL OSCILLATIONS
TWO-STAGE MECHANICAL OSCILLATOR - UNUSUAL MACHINE

A simple mechanism (Figure 1.) with new mechanical effects, representing the source of energy. The machine has only two main parts: a massive lever and a pendulum. The interaction of the two-stage lever multiplies input energy convenient for useful work (mechanical hammer, press, pump, electric generator...).

Figure 1. Mechanical Hammer with a Pendulum
1 - anvil, 2 - massive lever, 3 - lever axel, 4 - physical pendulum



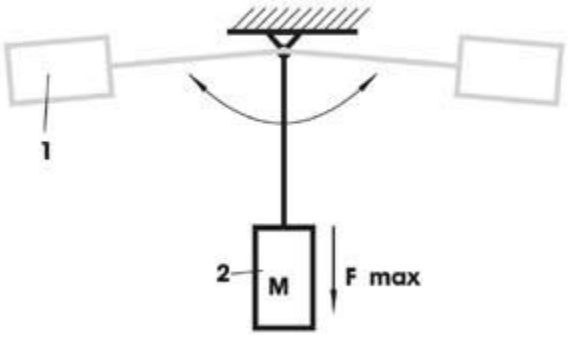
The best results were achieved with the lever axel and pendulum at the same height, and the base of the massive lever above the centre of mass, as shown in Figure 1.

ORIGINS OF ENERGY BASED ON DIFFERENCE IN POTENTIAL

Energy is created due to the difference in existing devices. Consumers of energy use the difference in the potential between the plus and the minus (direct current) and zero and the phase (alternate current). All heat and thermal motors accomplish useful work due to the higher temperature and pressure. Mills and power plants use different levels of water...

However, difference in the potential of two-stage oscillator, "unusual machine" has not been considered so far.

Figure 2. Difference of the Potential during Oscillation of the Physical Pendulum
1 - weightless state in the upper position
2 - culmination of force during the fall in the lower position



Since there is a difference in potential (Figure 2.) between the weightless state (1) and culmination of force (2) during oscillation of the pendulum, the same is true for centrifugal force, which is zero in upper position, and culminates in the lower position at maximum speed. Physical pendulum is used as a single-stage oscillator in the system with a lever.

After many years of trials, consultations and public appearances, it could be said that this occurrence is being researched and investigated all over the world (author is in possession of evidence). Simplicity enables construction of houses by owners themselves.

Efficiency of the model can be increased by mass, since the relationship between the volume of the lever weight and its surface increases the mass.

Figure 3. Experimental Models

Extreme technical solutions can be tourist attractions even as prototypes.

Previous examples emphasize the importance of synchronized frequency with every model. Oscillations of the physical pendulum have to be maintained with certain speed, otherwise input energy is wasted.

Mechanical hammer (photo & video) and a pump with a pendulum (photo & video) work more efficiently with a shorter pendulum, but with air movement (educational toy - photo & video), longer pendulum works better.

According to the theory of oscillation, oscillatory movements in nature are the most frequent ones, and can be difficult to analyze.

POSTULATES AND DOGMAS

The easiest way is to proclaim something as impossible and refer to laws. However, are all laws of Physics perfect and eternal?

Luckily, and most probably, they are not. Therefore, exceptions of extremely efficient machines are possible (Fig. 1-3.).

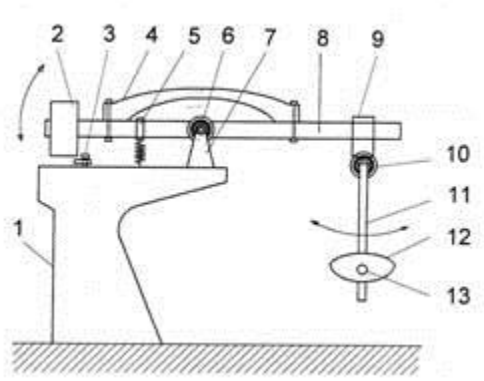
In the same way, the speed of light can be deemed unreachable, according to Einstein's formula E=mc2, because the mass would be infinite. However, the mass does not change with speed, and the kinetic energy increases with the square speed. Therefore, the speed of light can be reached by future space crafts, if these ideas are considered.

PHOTO & VIDEO PRESENTATION of two-stage mechanical oscillations research (prototypes and models, the new mechanical effects, experiments...):
http://www.veljkomilkovic.com/PrototipiEng.html

A LEVER WITH A PHYSICAL PENDULUM AS A SIMPLE MACHINE

Although the basic model, which Veljko Milkovic called "The mechanical hammer with a physical pendulum", showed in the first experiments that the output energy is larger than the input energy, Milkovic concentrated on the practical use of the model. This can be seen by the order of the patent requests. Later, it turned out that this model is also a perpetuum mobile, when usage of input energy is in question. However, the model is energetically open both at the entry and the exit part, so the exact measurement of efficiency would be complicated. The matter of the exact measurment was postponed, but the noticed fact was that the model represents a new type of a simple machine, and that is very interesting and useful, even without multiplying input energy.

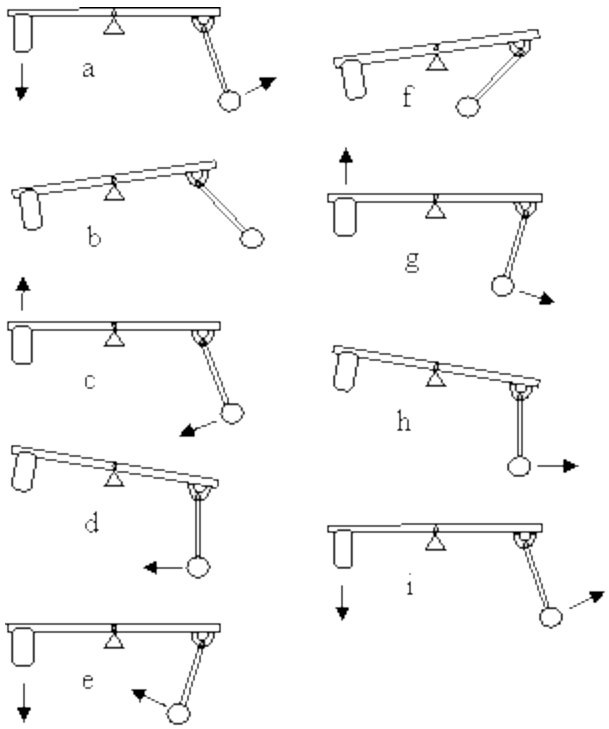
The next part will cover the characteristics of the "basic model" which make it a simple machine, putting aside the matter of the efficiency percentage.



Mechanical hammer with a physical pendulum is an original device - a machine which is turning the oscillations of the physical pendulum, hanged on an arm of a two-armed lever, into the oscillations of the weight on the arm of the same lever. The axis of rotation, the axle of the physical pendulum is parallel to the axis of rotation, the axle of the lever. The axle bed of the lever is connected to the surface with girders. The axle of the physical pendulum is oscillating up and down, when the pendulum is out of balance. Thus, the weight on the other arm of the lever is oscillating as well. The arm on which the pendulum is positioned is lifted with every movement of the pendulum away from the balance, because the weight of the pendulum weight is decreasing, and the same lever arm is lowering when the pendulum is closer to the balance position and that happens in succession. The period of oscillation of the lever and the weight on it is twice shorter than the period of oscillation of the physical pendulum and the weight on it.

In Picture 1, the triangle represents the support for the two-armed lever. The small circles are the two axis. The lever rotates on one and the physical pendulum on the other. On the right arm of the lever is an angle on which the physical pendulum is oscillating, and on the left arm is the weight which oscillates together with the lever. As soon as the physical pendulum is out of balance and begins to oscillate, the lever starts to oscillate as well..

Picture1



Forced oscillation of the weight on the lever can be of an impact type when the weight, at the end of every oscillation, hits the surface or an object on the surface like a hammer. At that moment, the force of the impact is greater than the force maintaining the oscillation of the pendulum, which still does not say anything about the balance of energy since the effect of these two forces is not simultaneous. It would be a completely different story if we were talking about strength and not force, but we would need a different approach in that case.

"EXCESS" ENERGY

Veljko Milkovic conducted a series of experiments on the basic model - mechanical hammer with a physical pendulum. All the experiments led to the conclusion that the input energy is smaller than the output energy. Since the law of energy sustainability could not help here, he did not spend too much time to explain the occurrence in a theoretical way.

One of the possible explanations was the effect of the forces involved in the work of the oscillators. Forces are more specific and simple physical entities than energy. However, there were many different forces present during the experiments, so it was hard to compare them.

Most of the experts and scientists familiar with experiments conducted by Milkovic did not go into more detailed analysis, with an exception of professor Bratislav Toši?. Unfortunately, his extensive mathematical analysis did not provide a clear result concerning the energy balance.

Experts usually followed their instinct. Some were "in favour", some were "against" perpetuum mobile. Among the first group, after some hesitation, was Nebojša Simin. Sceptical at the beginning, as many other physicists involved in this research, his resistance was defeated with a simple gesture. He put his hand on the lever which was oscillating. The pendulum continued to

sway as if nothing happened, while the energy was transferred from the lever to his arm. The lever was working tirelessly, without a decrease in the oscillatory energy of the pendulum. ?imin did not need a more convincing proof than this to convince him that this is the perpetuum mobile. It practically makes no difference whether the lever is doing something or not. That work does not reflect the oscillation of the pendulum, and the pendulum in return, as it oscillates, makes the lever to oscillate too. Simin was positive that the efficiency percentage of the lever with a physical pendulum larger than the one. At the same time, it meant that the law on energy sustainability can not be applied for this model, which is only a step away from the autonomous perpetuum mobile. For the model to be autonomous, it was necessary to come up with an idea how to return a part of the energy from the lever to the pendulum, so that it would not stop because of friction and air resistance. Milkovi? solved this problem as well through his patents.

Unlike Milkovic and his associates, Simin did not like the idea of giving the main role to the gravitational potential. If the friction is neglected, pendulum work force is equal to zero. On the other hand, no one doubted the meaning of the centrifugal force of the pendulum. It was clear from the beginning that they should follow that lead.

A lot of time was spent on the basic model and the matter of maintaining the oscillation of the pendulum, having in mind the friction and air resistance. Milkovic solved that problem with electromagnetic bumpers in the patent "The piston water pump with the pendulum and electromagnets" ,which he handed in for registration on 02/22/01. In that way, he completed his previous model: "Electric generator with the pendulum and magnetic bumpers" , from 06/14/00. Observed individually, neither of these two models are autonomous, but together, they are. The combination of these two models is the first model of perpetuum mobile.

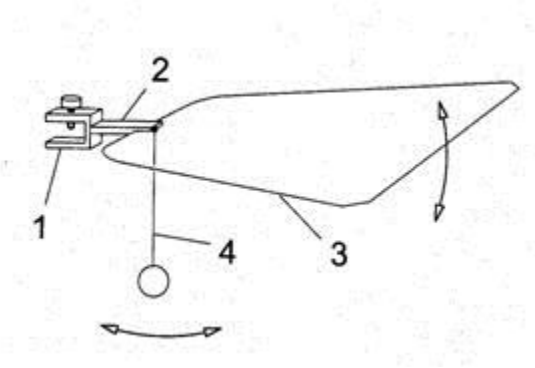
Milkovic was also troubled with the problem of the relatively slow oscillation of the pendulum, which produced low-frequency current. He did not solve this problem fully so far. An attempt with the model: "The electric generator with an elastic pendulum handle" ,which offers faster oscillations, does not solve the problem, because that is a single-stage oscillator which has an efficiency coefficient lower than one. Among the first nine patents, this is the only one which has nothing in common with perpetuum mobile.

"Surplus" or "excess" energy was usually attributed to the gravitational potential. For sceptics, that was the "proof" that this could not be perpetuum mobile, because the gravitational field during oscillation of the pendulum is zero. In their opinion, that was enough to conclude that there could not be "excess" energy. The only thing everyone agreed on was the efficiency of the device.

Qualms about the efficiency coefficient could not be satisfied without a deeper analysis. The matter was the participation of the centrifugal force of the physical pendulum in the lever oscillations, as well as energetic consequences of that participation. That force does not influence oscillation of the pendulum, but is directly responsible for the oscillation of the lever. It is clear that the axis of the pendulum, if we neglect the rotation, does not have kinetic energy in the pendulum system, but it does in the lever system. However, potential energy of that point changes in the lever system. It was not clear whether the change of the potential energy, despite it is zero during one oscillation, has any effect on the phenomenon as a whole. As far as the work

is concerned, the pendulum operates against friction and air resistance, and the lever operates, for example, through the hammer hitting the surface, or by producing the alternative current by means of induction. It was not clear which work force was bigger, the pendulum or the lever. The response could not be a direct one, because precise measuring was needed, but it could not have been conducted on the original model. This was also the case with the models Milkovic constructed in the meantime. One of them is the fan, which is a two-stage oscillator (Picture 2.). The fan is swaying for unusually long time after the pendulum has only once been put out of balance. But, the theoretical explanation in this case is even more complicated that the one of the original model.

Picture2



Let us get back to the basic model. Some things are obvious just when you look at the movements of the two-stage oscillator. There is a significant difference between the two conditioned oscillators. The lever is forced to oscillate, unlike the pendulum. The opposite is not possible because of the influence of gravity on the weight of the pendulum. If the pendulum is connected to an external energy consumer, the pendulum soon stops with oscillations, as well as the lever. However, if the lever is connected to an external energy consumer, the pendulum continues with oscillations. If the external consumer does not take all the energy from the lever, it will continue to oscillate with a smaller amplitude. If we suppose that the positive work force of the lever, and it's useful work force are greater than the work of the pendulum while it is overcoming friction and air resistance, we get "excess" energy. That "excess" can occur only due to the centrifugal force of the pendulum. However, is that really "excess" energy or does it just seems so?

ENERGY OF A PENDULUM AND A LEVER

By definition, energy is a capability of an object to perform work. Therefore, energy does not cause any consequences on anything, but it could and could not have consequences in regards of another object starting to move.

Even a basic model made by Milkovic established that a change of the lever energy does not change the pendulum energy. Mechanical energy of the lever, in the pendulum system, is equal to zero, so that the lever is not in position to affect the pendulum. In the surface system, the lever energy is different than zero, and it can perform work if something is on its way. The lever can

perform work be hitting the surface, but it would still not affect the pendulum. What ever happens to the lever, the pendulum energy will not change.

Energy of the lever is at the disposal of an external energy consumer, which does not affect the energy of the pendulum, whether the lever is doing anything or not. If the external consumer takes over a part of this energy, the oscillating amplitude of the lever will decrease. Since the lever is the one oscillating forcibly and not the pendulum, it continuos with oscillations even when partly dampened. Oscillation of the pendulum is uninterrupted even when the lever oscillation is completely dampened. As soon as the lever stops being a working body and stops providing energy to the external consumer, it starts oscillating again, with a same amplitude as before. This is a clear and unambiguous sign of "excess" energy.

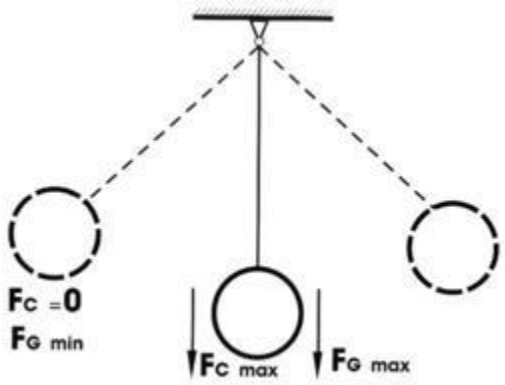
Mechanical energy of the lever occurs without additional input of energy from the outside, due to the way in which the pendulum is moving. Work force of the lever does not mean that a pendulum must lose it's part of the energy. Pendulum just needs to be moving. On the other hand, the pendulum is not moving because it is getting the energy from somewhere outside, but because of inertia. In other words, the lever is capable to denounce a part of its energy for the external consumer, even though that process does not include any working body outside of the device. This is all under condition that the pendulum is oscillating without obstructions. It is understood that the pandulum has been previously thrown out of balance. After a short time, this energy in the total operational, energetical or power balance can be neglected.

Friction and air resistance were the stumbling block, in both theoretical and practical sense, especially on the pendulum. Milkovi? solved this problem in an indirect way, with the combination of two models.

In this way, interpretation of the device does not fall under the usual theory of energy sustainability. Classic mechanics either did not foresee objects such as multi-stage oscillators or it overlooked certain characteristics of these object. Or, maybe both.

GRAVITATIONAL POTENTIAL EVERYWHERE

Whether we like it or not, gravity exists and we can not influence it, since there is still no gravity isolator. However, physical pendulum is in weightless state in its upper position during oscillations.



This works as a substitute for a gravity isolator, and the efficiency proved to be extremely high at two-stage oscillators shown above.

Experiments also confirmed supplemented formula for kinetic energy, which explains the surplus of energy.

Speeds are added together, originating from the impulse i.e. energy invested in maintaining the pendulum in oscillation, which happens in the upper position.

Additional acceleration of the pendulum is due to gravity. If the above mentioned formula is applied for calculation, the surplus of energy is clear, and it originates from gravitational potential.

$$E_k = \frac{M(v_1 + v_2)^2}{2}$$

In addition to results in earthly conditions, space probes had excellent results, so it is useful to mention that kinetic energy can be increased with the help of gravity.

VIDEOS

Videos of two-stage mechanical oscillations research with review of new mechanical effects, experiments, prototypes, models, measurements... and introduction of new source of energy on the basis of inertial forces and gravity:

1. Full presentation (36 minutes - 44 MB; English subtitles) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-1)_full_video_presentation.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-1)_full_video_presentation.wmv

Excerpts:

2. Device for testing single-stage and two-stage oscillations (06:34 minutes - 7.28 MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-2)_Device_for_testing.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-2)_Device_for_testing.wmv

3. Fast model with an eccentric rotor (01:38 minutes - 1.82 MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-3)_Fast_model.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-3)_Fast_model.wmv

4. Mechanical hammer with a pendulum (04:46 minutes - 5.29 MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-4)_Mechanical_hammer.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-4)_Mechanical_hammer.wmv

5. Laboratory pump with a pendulum (04:20 minutes - 4.82 MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-5)_Laboratory_pump.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-5)_Laboratory_pump.wmv

6. The universal two-stage oscillator as mechanical hammer (the weight of hammer is approximately 25 kg) (0:48 sec. - 3MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-6)_Universal_oscillator-hammer.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-6)_Universal_oscillator-hammer.wmv

7. The universal two-stage oscillator as electric generator (nine small generators --- dynamo flashlights as output work) (0:46 sec. - 6.5 MB) ---
http://www.veljkomilkovic.com/Video/Veljko_Milkovic_(video-7)_Universal_oscillator-generator.wmv
http://www.micropixel.biz/veljkomilkovic/videos/Veljko_Milkovic_(video-7)_Universal_oscillator-generator.wmv

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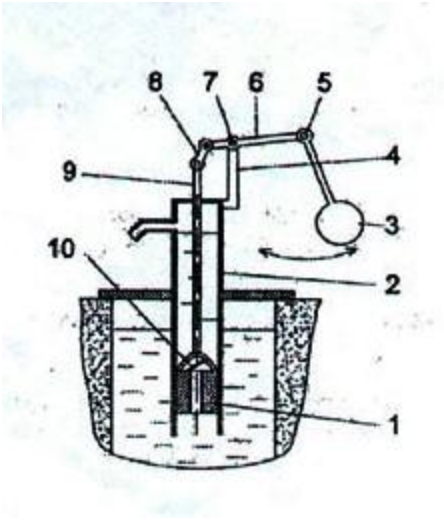
YUGOSLAVIAN PATENTS

Veljko Milkovic has registered some 110 inventions with the former Federal institute for patents, now Federal Intellectual Property Office (**www.yupat.sv.gov.yu**) in Belgrade (Serbia). On the base of that, 36 patents have been issued.

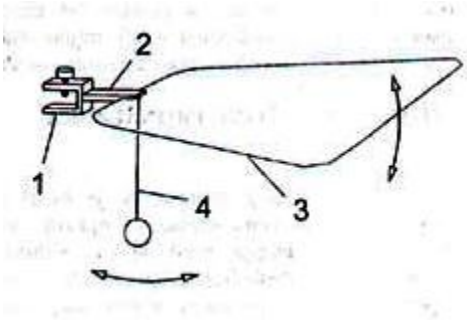
Veljko Milkovic is presently in possession of 22 patents, with several new ones on the way.

Below you can see titles of patent documents, for the latest 22 that had been approved:

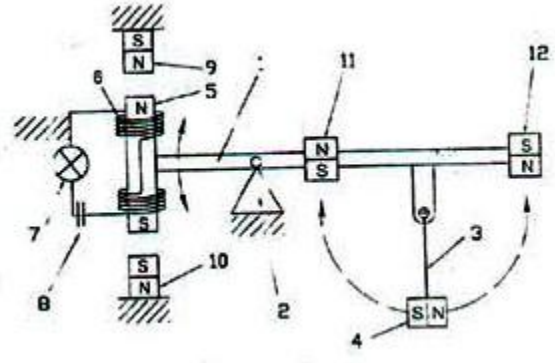
(1)
P-577/99 --- Hand Water Pump with a Pendulum



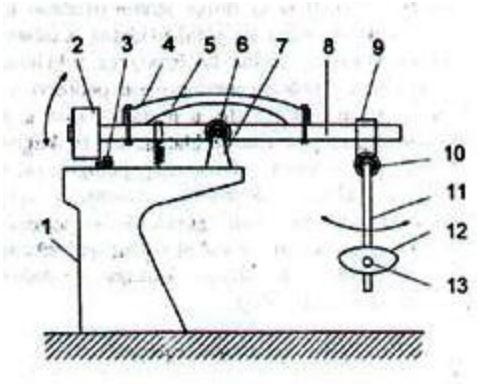
(2)
MP-32/00 --- Fan with a Pendulum



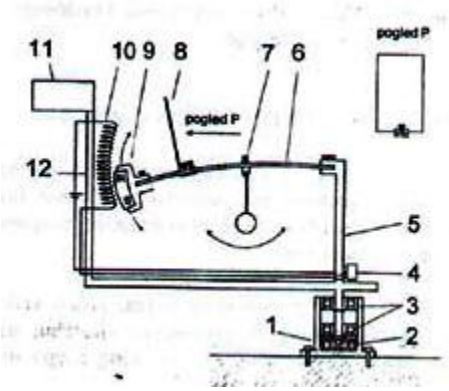
(3)
MP-37/00 --- Electric Generator with a Pendulum and Magnetic Bumpers



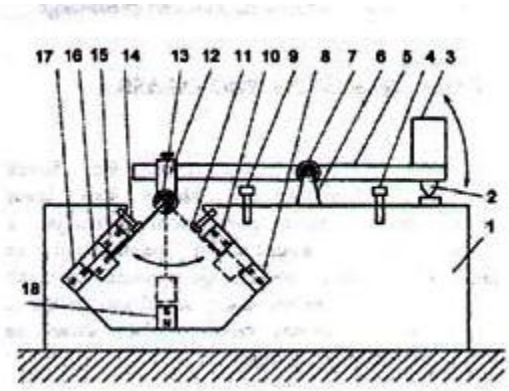
(4)
MP-60/00 --- Mechanical Hammer with Adjustable Pendulum Weight



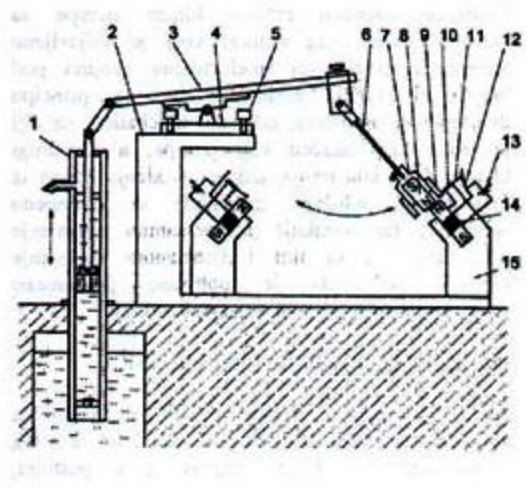
(5)
MP-63/00 --- Electric Generator with Wind and Gravity Drive



(6)
MP-14/01 --- Press with a Pendulum and Magnets

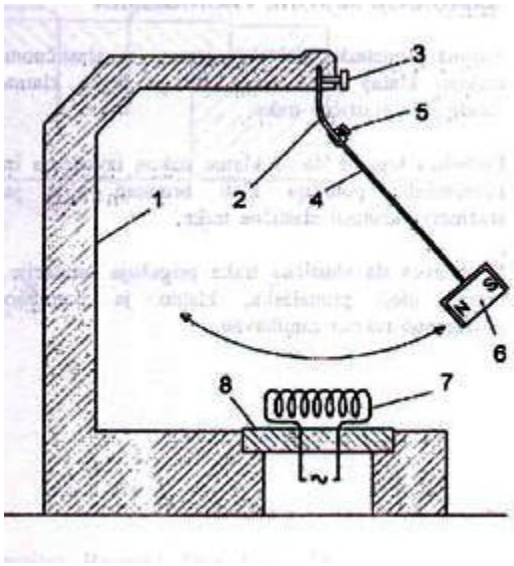


(7)
MP-23/01 --- Piston Water Pump with a Pendulum and Electro Magnets



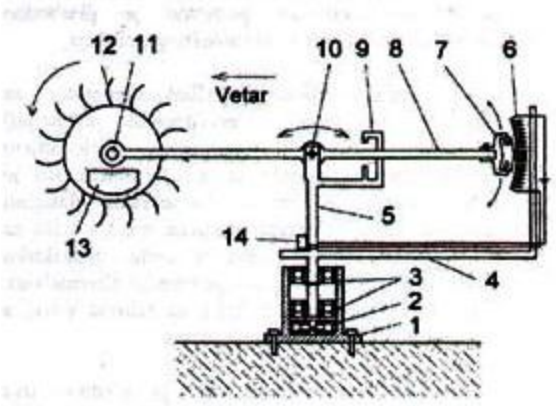
(8)

MP-33/01 --- Electric Generator with an Elastic Pendulum Handle



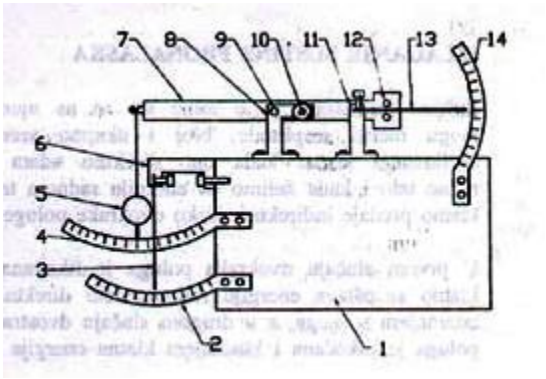
(9)

MP-4/01 --- Wind Generator with a Two-Armed Lever and Wind Circle with an Eccentric Mass



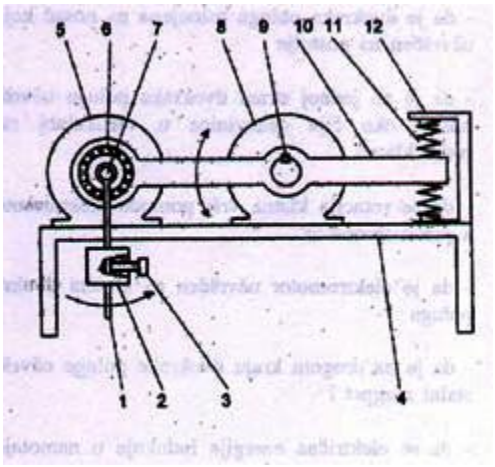
(10)

MP-106/01 --- Instrument for Comparing the Amount of Work Created by a Pendulum...



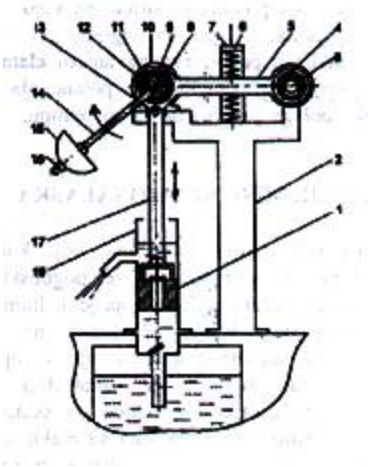
(11)

MP-32/02 --- Device for the Production of Energy from Gravitational Potential and Centrifugal Force with Instruments for Efficiency Measurements

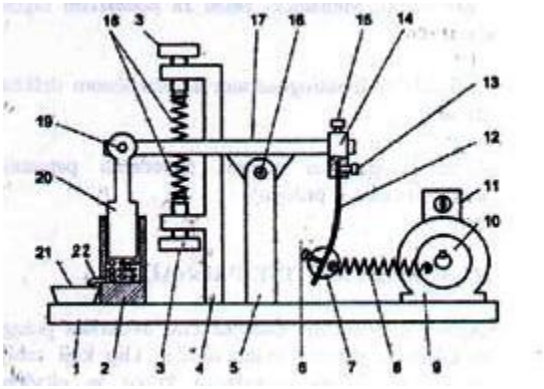


(12)

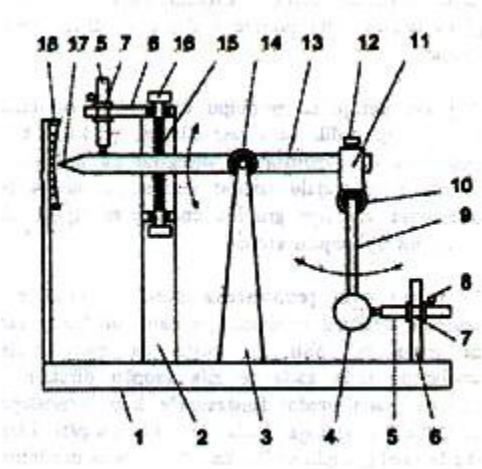
MP-65/02 --- Piston Pump with an Electric Motor and an Excenter



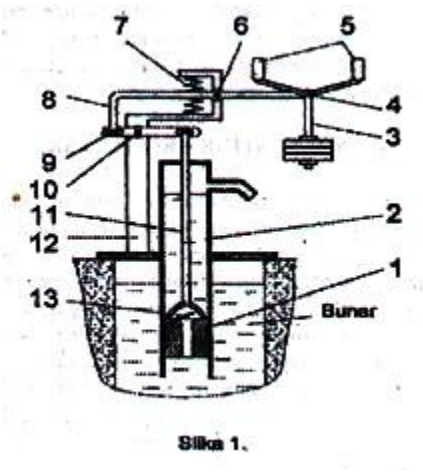
(13)
MP-78/02 --- Sieve with a Two-Armed Lever and a Pendulum that Oscillates under Force



(14)
MP-80/02 --- Device for Inspection of Oscillations Created by a Two-Armed Lever and a Pendulum Depending on the Place of an Impulse Force

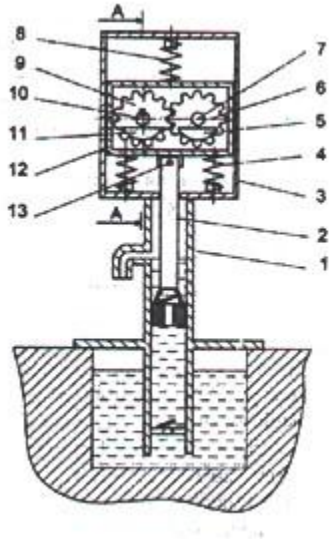


(15)
MP-90/02 --- Hand Water Pump with a Pendulum

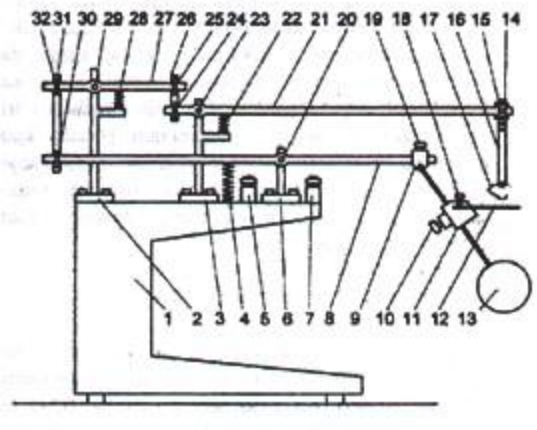


Slika 1.

(16)
MP-94/02 --- Piston Water Pump with an Electric Motor and Cogwheels with an Eccentric Mass

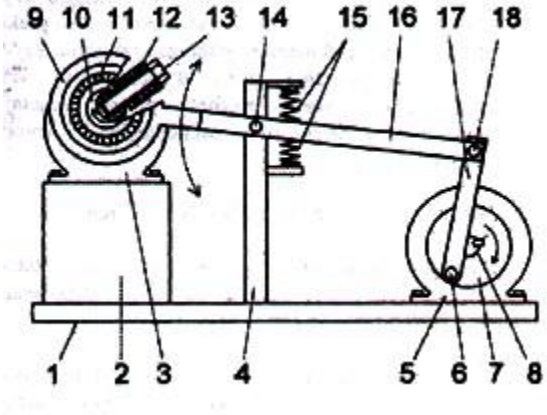


(17)
MP-98/02 --- Mechanical Toy with a Pendulum and Three Oscillating Levers



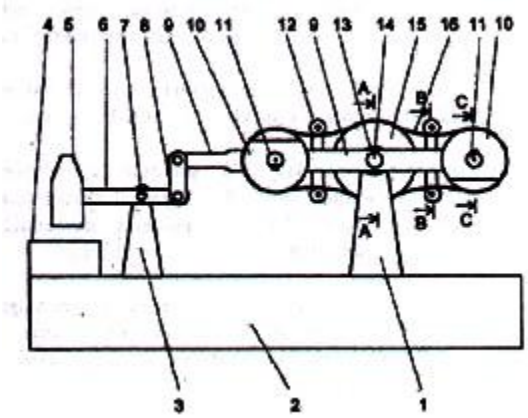
(18)

MP-100/02 --- Generator of Electrical Energy Driven by an Electric Motor, Gravitational and Centrifugal Force

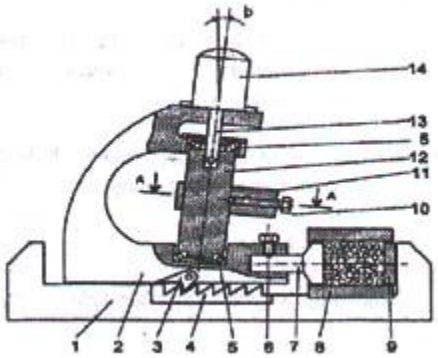


(19)

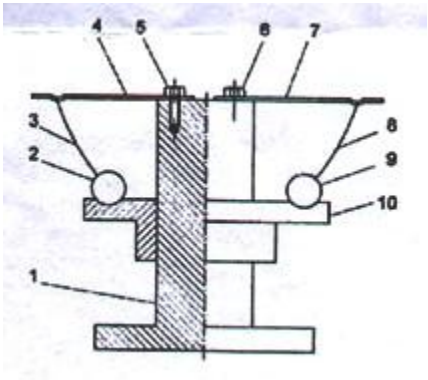
MP-122/02 --- Hammer with an Electro Motor Drive and Rotating Eccentric Masses



(20)
MP-129/02 --- Horizontal Press for Briquette Production



(21)
MP-27/04 --- Instruments for Comparison of Single-Stage and Two-Stage Oscillations



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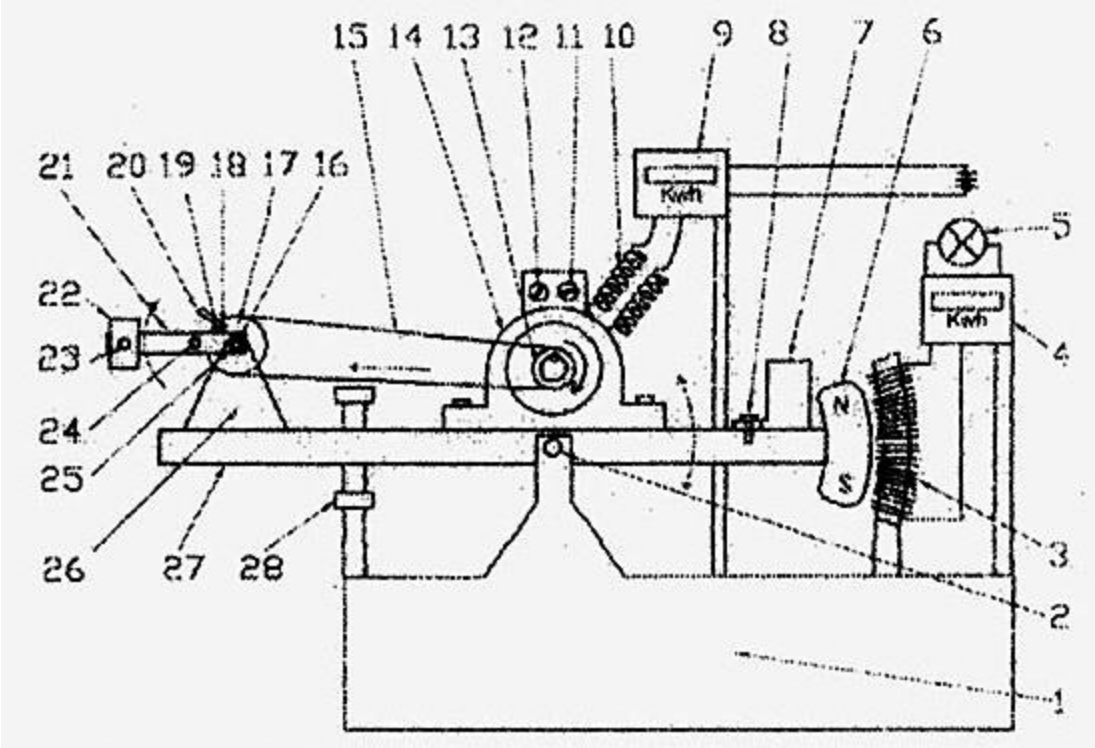
(22)
799/03 (49463 B) --- Machine for Producing Energy from Gravitational Force with Efficiency Measuring Instruments



Abstract --- Machine for producing energy from gravitational force with efficiency measuring instruments comprises of a foundation (1) whereon over a spindle (2) is set a double arm lever (27), the oscillation amplitude of which is limited by a position arrester (28). On the double arm lever (27) is on one side hanging a pendulum (21) with a weight (22), and on the other side a permanent magnet (6) opposite to which on the foundation (1) is fixed an induction coil (3). Pendulum (21) is hung on one side os the double lever arm (27) over the bearings (25) that are drawn over the pine (16) that is firmly fixed near the top of the carrier (26). On the pendulum (21) laterally fixed is a roller (24), and on its loose end a weight (22) position of which in relation to pivot axis is adjustable by a screwed bolt (23). On the same spindle (16) over the bearing (29) is set a pulley (17). The distance from the loose top of lever (20) and roller 924) from the spindle axis (16) is equal. He pulley 917) over the belt (15) is coupled to a pulley 913) at an electric motor (14) that is fixed in the middle of the double arm axis (27) and to which an electric energy consumption measuring instrument (9), a regulator for continual change of number of revolutions (11) and a timer 912) of programmed time for the temporary switch on of the electric motor (14) are connected. On the opposite side of the double arm lover (27) is set the weight (7), position of which is adjustable by means of the screwed bolt (8) On the same side the permanent magnet (6) is set, opposite to which is on the foundation (1) fixed an induction coil (3) with consumer (5) and an instrument (4) for measuring the quantity of produced energy.

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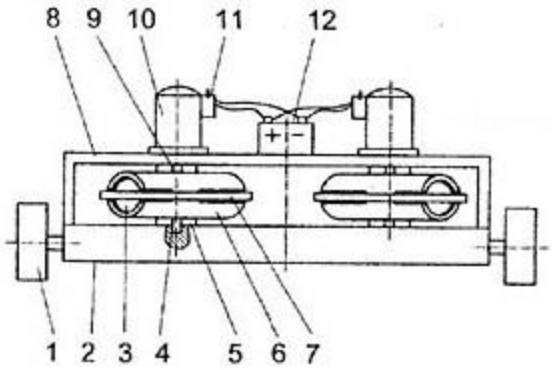
(23)
P-390/04 -- Device for Studying Inertial Forces



Abstract --- Device for studying inertial forces, consists of a platform (2) whereon are laterally set wheels (1). On the platform (2) from the top transversely and firmly set is a frame (8) onto which are from the top fixed a cell (12) and symmetrically two electric motors (10) with regulators (11) for adjusting number of revolvements. On the shafts (9) of the electric motor (10) are fixed the pipes (6) that are from the bottom side in the same axis by means of the pins (4) set in the platform (2). Thus the pipes (5) may revolve in horizontal plane. The pipes (6) are separated along the middle, and in them from both sides the globes (3) diameter of which is shorter than the internal diameter of the pipe (6). On the platform (2) by means of the screws (13) are fixed the holders (5) whereon are firmly fixed the rings (7) that go through horizontal cross-sections set on both sides of the pipe (6), where adjusting of the distance of the center among the rings (7) is allowed in relation to the axis of the electric motor 910), i.e., center of rotation of the pipe (6). Along with the idea of the invention, by means of a regulator 11, it is possible to changed the speed and directions of rotation of the pipe (6) and by the screw (13) to alter the size of rotation eccenter of the globes (3) in relation to the center of rotation of the pipe (6), as the path of the globes (3) is defined by the internal circumference of the ring (7). As the size of the centrifugal force of the globes (6) depends on the radius of rotation and speed of angle, thus it is allowed to adjust the speed and direction of motion of the wheels.

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http://www.veljkomilkovic.com/Images/Misljenje%205.JPG

Opinion of Prof. Dr. Velimir Abramovic

Subject: Double Oscillator Invented by Veljko Milkovic

Time Institute --- Foundation for the Science of Time
Dordtselaan 137a
3081 BL Rotterdam
Halandija

Belgrade (20 June 2002)

I happen to have visited inventor Veljko Milkovic in Novi Sad and gained insight into his original and useful work on double mechanical oscillator.

It is a lever with a pendulum at one end, a mechanical machine using a principle that no mechanic before Milkovic, including Archimedes, thought of.

In addition to obvious practical application, with the system output several times larger than the input force, double oscillator has important theoretical characteristics:

(1) When the pendulum is out of balance it becomes a system without inertia, which uses gravity to oscillate and turns it into rotation through the lever.

(2) Obstructions on the lever do not influence the pendulum, which means that the pendulum is independent from the lever, but the opposite is not the case. In other words, gravity is the reason for mechanics. It is a reversible gravitational-mechanical process which turns gravity into mechanical work and vice versa, an obvious process in nature. The sum of gravity forces is always larger than the sum of losses: which is the precondition for constant movement of heavenly bodies.

(3) The double oscillator is also the best mechanical analogy of the alternating current, even better than Tesla's analogy.

A model has been set up in Mr Milkovic's apartment: a water pump that needs only a slight pressure with one finger to put the pendulum out of balance and add impulses with a minor force. The output is enormous compared to the input force of pumping. Practical advantages are obvious.

Anti-Gravity Motor

It is very strange, but it turned out that the same invention fulfils two ancient human dreams. One about a machine which works continuously, and the other about the flying device which moves according to the wish of the person on the device. Here, of course we do not mean aeroplanes and rockets, but a flying machine that does not use any kind of fuel. A vehicle with such a motor could move on the ground, in the air or anywhere in space, without fuel.

Anti-gravitational motor is machine that confronts so-called "laws of nature". This idea could not have been believed in, without being pronounced naive or demented. Anti-gravitational motor belong to the field of science-fiction, although contemporary physics knows the case where a law of action and reaction does not apply in one inertial system. This is the magnetic force which is emanated by two particles as they move.

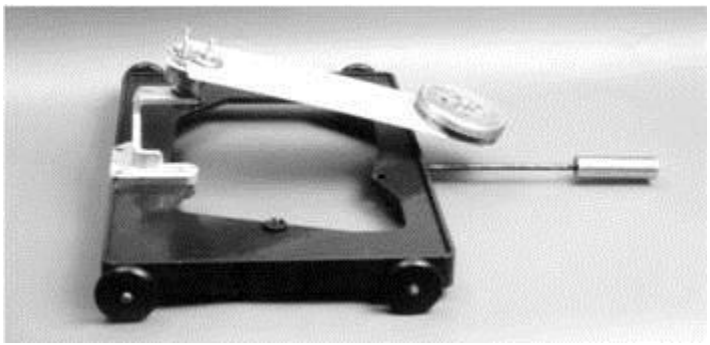
Picture 1 --- A cart with one pendulum askew

Inconsistency is frequent in physics. Besides, mechanics is somehow outdated, and left to technicians and mathematicians. These three disciplines do not have the same basis, and they are more inconsistent than it is usually recognised. Physics explores occurrences and events in nature, independent of their meaning to humans, whilst technique deals with the possibility to join these occurrences in one whole. Mathematics precisely defines conditions under which these occurrences happen, but does not, and can not, take into account the meaning of these occurrences, which is an integral part of physics. Mathematics also can not express practical purpose of an occurrence, which techniques can. Therefore, these three disciplines, in spite of having things in common, can not merge into one another. Physics basically abandoned the field of mechanics, as if it has nothing more to say.

Classical physics is, in large part, Newton's physics, and he was more of a mathematician than a physician. Maybe that is one of the reasons why there is a span of several centuries between the discoveries of Galilei and perpetuum mobile, and even an anti-gravitational motor. Physics is relying too much on quantification of physical constants that are part of a certain occurrence, while, at the same time, it ouches the qualification of these same occurrences to the side.

As far as technique is concerned, it prospered immensely, especially in the 20th century. On the other side, it is well known that new discoveries are usually technically very simple. For example, from a technical point of view, Milkovi?'s cart shown in Picture 2. looks more like a toy than an attempt to make an anti-gravitational motor. When you look at it from the physics point of view, it looks completely different.

Picture 2 --- Small cart with a pendulum askew



This cart contains everything an anti-gravitational motor needs. As with other models made by Milkovi?, there is an inertial force pushing them in one direction. The main part of the model is a physical pendulum which is askew and is moved by gravity. Gravitational field should be replaced with a magnetic field, to enhance the efficiency of the model. Milkovi? made a model with two askew pendulums, which oscillate with phases positioned towards one another in an angle of 180°.

Picture 3 --- A cart with two pendulums askew

Perpetuum mobile and an anti-gravitational motor have been hiding in the shadows of scientific thought for along time. That shadow certainly contains many similar "scraps", awaiting future exploration.

Cart with a pendulum - Vehicles with internal and inertial drive

New video presentation of Serbian inventor, Veljko Milkovic, demonstrating his perennial research work on the idea of moving vehicle without indirect mechanism (transmission). Milkovic explains a new power and how the isolated powers can perform one-way moving of model using tensile forces of physical pendulum.

There is also an attempt to improve and to confirm the law of action and reaction (The third Newton?s law), which hadn?t undergone any revision from its beginning.

From the contents: Tensile forces of physical pendulum, Motion without usual reflection, An addition to the Law of action and reaction (The third Newton?s law), Cart with a pendulum, Truck with horizontal physical pendulum...

This video is an excerpt from the TV show ?Svet ideja?, Radio Television of Novi Sad (Serbia) recorded in 1996.

YouTube video in English, 7 min.:
http://www.youtube.com/watch?v=4foY5r2TMOo

More info:
http://www.veljkomilkovic.com/Antigravitacioni_motorEng.html

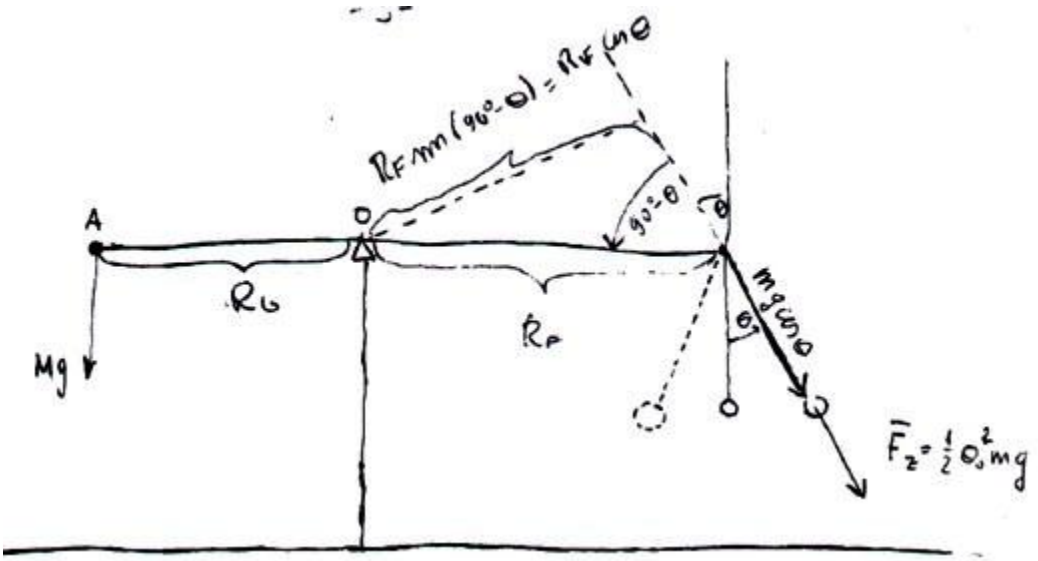
Additional information can be found also in the book by Veljko Milkovic "Anti-gravity motor":
http://www.veljkomilkovic.com/KnjigeEng.html#motor

MATHEMATICAL ANALYSIS
(Excerpt)

by

Prof. Bratislav Tosic

(http://www.veljkomilkovic.com/Images/Mislhenhe3.JPG)



$$\ddot{\varphi} = -\frac{g}{R_F} + \frac{g}{R_F}\frac{M}{m}\frac{R_G}{R_F} - \frac{g}{R_F} - \frac{\Theta_0^2}{2}\frac{g}{R_F} + \frac{g}{R_F}\Theta^2 + \frac{1}{2}\Theta_0^2\frac{g}{R_F}\cdot\frac{1}{2}\Theta^2$$

$$\ddot{\varphi} = \frac{g}{R_F}\left(1 + \frac{1}{4}\Theta_0^2\right)\Theta^2 - \frac{g}{R_F}\left(2 + \frac{\Theta_0^2}{2} - \frac{M}{m}\frac{R_G}{R_F}\right) \quad \ldots\ldots (20)$$

Complete Mathematical Analysis of Biphase Oscillator (9 pages):

http://www.veljkomilkovic.com/Images/Misljenje%204%20-%20Mathematicka%analiza%20-%20Tosic.pdf

ANALYSIS OF THE INFLUENCE OF THE CENTRIFUGAL FORCE DURING OPERATION OF THE TWO-STAGE MECHANICAL OSCILLATOR BY VELJKO MILKOVI?
"...It seems clear that the influence of the centrifugal force is the key to the explanation of the

energy surplus of the two-stage oscillator by Veljko Milkovi?, the inventor."
http://www.veljkomilkovic.com/Images/Analysis_Jovan_Bebic_1.pdf

MEASURING THE RATIO OF OUTPUT AND INPUT ENERGY OF THE TWO-STAGE MECHANICAL OSCILLATOR BY VELJKO MILKOVI?
"...Therefore, ratio of energy at the output and energy at the input is 22.89..."
http://www.veljkomilkovic.com/Images/Analysis_Jovan_Bebic_2-measuring.pdf

CALCULATION OF ENERGY SURPLUS OF THE TWO-STAGE MECHANICAL OSCILLATOR IN THE EXPERIMENT WITH MANUAL DYNAMO LAMPS

In one more analysis and measurement, Jovan Bebic considers the efficiency of Veljko Milkovic's two-stage mechanical oscillator in the famous experiment with the hand flashlights and reports that the output/input ratio is 2.8 times in his same replicated experiment.

http://www.veljkomilkovic.com/Images/Analysis_Jovan_Bebic_3-experiment_dynamo_lamps.pdf

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Hokei MINATO

Magnet Motor

John Dodd: "The Techno Maestro's Amazing Machine" (*Japan, Inc.*, March 2004)

Kohei Minato: US Patent # 4,751,486

K. Minato: US Patent # 5,594,289

Henry Curtis: KeelyNet BBS Posts

Michael Randall Emails

Padrak: INE Press Release

Photos

The Techno Maestro's Amazing Machine

Kohei Minato and the Japan Magnetic Fan Company

A maverick inventor's breakthrough electric motor uses permanent magnets to make power -- and has investors salivating

by John Dodd

When we first got the call from an excited colleague that he'd just seen the most amazing invention -- a magnetic motor that consumed almost no electricity -- we were so skeptical that we declined an invitation to go see it. If the technology was so good, we thought, how come they didn't have any customers yet?

We forgot about the invitation and the company until several months later, when our friend called again.

"OK," he said. "They've just sold 40,000 units to a major convenience store chain. Now will you see it?"

In Japan, no one pays for 40,000 convenience store cooling fans without being reasonably sure that they are going to work.

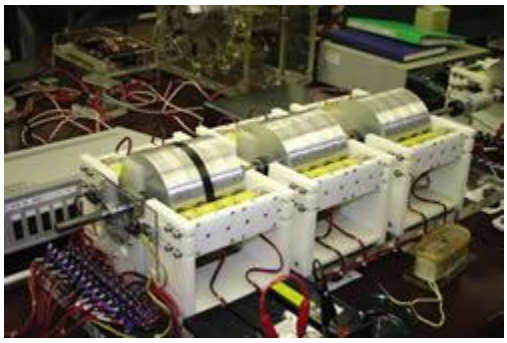
The Maestro ~

The streets of east Shinjuku are littered with the tailings of the many small factories and workshops still located there -- hardly one's image of the headquarters of a world-class technology company. But this is where we are first greeted outside Kohei Minato's workshop by Nobue Minato, the wife of the inventor and co-director of the family firm.

The workshop itself is like a Hollywood set of an inventor's garage. Electrical machines, wires, measuring instruments and batteries are strewn everywhere. Along the diagram-covered walls are drill presses, racks of spare coils, Perspex plating and other paraphernalia. And seated in the back, head bowed in thought, is the 58-year-old techno maestro himself.

Minato is no newcomer to the limelight. In fact, he has been an entertainer for most of his life, making music and producing his daughter's singing career in the US. He posseses an oversized presence, with a booming voice and a long ponytail. In short, you can easily imagine him onstage or in a convertible cruising down the coast of California -- not hunched over a mass of wires and coils in Tokyo's cramped backstreets.

Joining us are a middle-aged banker and his entourage from Osaka and accounting and finance consultant Yukio Funai. The banker is doing a quick review for an investment, while the rest of us just want to see if Minato's magnetic motors really work. A prototype car air conditioner cooler sitting on a bench looks like it would fit into a Toyota Corolla and quickly catches our attention.



Seeing is Believing ~

Nobue then takes us through the functions and operations of each of the machines, starting off with a simple explanation of the laws of magnetism and repulsion. She demonstrates the "Minato Wheel" by kicking a magnet-lined rotor into action with a magnetic wand.

Looking carefully at the rotor, we see that it has over 16 magnets embedded on a slant -- apparently to make Minato's machines work, the positioning and angle of the magnets is critical. After she kicks the wheel into life, it keeps spinning, proving at least that the design doesn't suffer from magnetic lockup.

She then moves us to the next device, a weighty machine connected to a tiny battery. Apparently the load on the machine is a 35kg rotor, which could easily be used in a washing machine. After she flicks the switch, the huge rotor spins at over 1,500 rpms effortlessly and silently. Meters show the power in and power out. Suddenly, a power source of 16 watt or so is driving a device that should be drawing at least 200 to 300 watts.

Nobue explains to us that this and all the other devices only use electrical power for the two electromagnetic stators at either side of each rotor, which are used to kick the rotor past its lockup point then on to the next arc of magnets. Apparently the angle and spacing of the magnets is such that once the rotor is moving, repulsion between the stators and the rotor poles keeps the rotor moving smoothly in a counterclockwise direction. Either way, it's impressive.

Next we move to a unit with its motor connected to a generator. What we see is striking. The meters showed an input to the stator electromagnets of approximately 1.8 volts and 150mA

input, and from the generator, 9.144 volts and 192mA output. 1.8 x 0.15 x 2 = 540mW input and 9.144 x 0.192 = 1.755W out.

But according to the laws of physics, you can't get more out of a device than you put into it. We mention this to Kohei Minato while looking under the workbench to make sure there aren't any hidden wires.

Minato assures us that he hasn't transcended the laws of physics. The force supplying the unexplained extra power out is generated by the magnetic strength of the permanent magnets embedded in the rotor. "I'm simply harnessing one of the four fundamental forces of nature," he says.

Although we learned in school that magnets were always bipolar and so magnetically induced motion would always end in a locked state of equilibrium, Minato explains that he has fine-tuned the positioning of the magnets and the timing of pulses to the stators to the point where the repulsion between the rotor and the stator (the fixed outer magnetic ring) is transitory. This creates further motion -- rather than a lockup. (See the sidebar on page 41 for a full explanation).

Real Products ~

Nobue Minato leads us to the two devices that might convince a potential investor that this is all for real.

First, she shows us the cooling fan prototype that is being manufactured for a convenience store chain's 14,000 outlets (3 fans per outlet). The unit looks almost identical to a Mitsubishi-manufactured fan unit next to it, which is the unit currently in wide use. In a test, the airflow from both units is about the same.

The other unit is the car air conditioning prototype that caught our eye as we came in. It's a prototype for Nippon Denso, Japan's largest manufacturer of car air conditioners. The unit is remarkably compact and has the same contours and size as a conventional unit. Minato's manufacturing skills are clearly improving.

The Banker and his Investment ~

Minato has good reason to complain about Japan's social and cultural uniformity. For years, people thought of him as an oddball for playing the piano for a living, and bankers and investors have avoided him because of his habit of claiming that he'd discovered a breakthrough technology all by himself -- without any formal training.

However, the Osaka banker stands up after the lecture and announces that before he goes, he will commit \100 million to the investment pool.

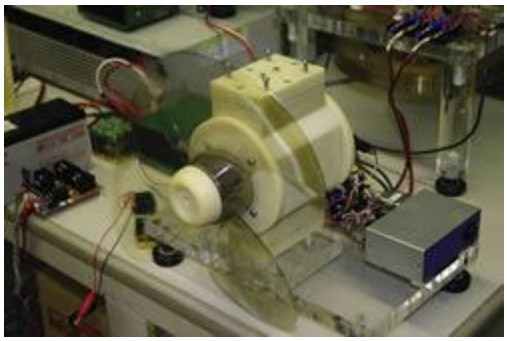
Minato turns to us and smiles. We brought him good luck, and this was his third investor in as many weeks to confirm an interest.

Bringing the Tech to the Table ~

With the audience gone, we ask Minato what he plans to do to commercialize the technology. His game plan is simple and clear, he says. He wants to retain control, and he wants to commercialize the technology in Japan first -- where he feels he can ensure that things get done right. Why doesn't he go directly to the US or China? His experiences in both countries, he suggests, have been less than successful. "The first stage is critical in terms of creating good products and refining the technology. I don't want to be busy with legal challenges and IP theft while doing that."

Still, the export and licensing of the technology are on his agenda, and Minato is talking to a variety of potential partners in other countries.

Whereas another inventor might be tempted to outsource everything to a larger corporation, part of what drives Minato is his vision of social justice and responsibility. The 40,000 motors for the convenience store chain are being produced by a group of small manufacturers in Ohta-ku and Bunkyo-ku, in the inner north of Tokyo -- which is becoming a regional rust belt. Minato is seized with the vision of reinvigorating these small workshops that until the 80s were the bedrock of Japan's manufacturing and economic miracle. Their level of expertise will ensure that the quality of the motors will be as good as those from any major company.



International Prep ~

Despite his plan to do things domestically first, Minato is well prepared for the international markets. He is armed with both six years of living and doing business in Los Angeles in the early 90s -- and with patent protection for over 48 countries. His is hardly a provincial perspective.

His US experience came after playing the piano for a living for 15 years. He began tinkering with his invention in the mid-70s. The idea for his magnetic motor design came from a burst of inspiration while playing the piano.

But Minato decided to drop everything in 1990 to help his daughter Hiroko, who at the age of 20 decided that she wanted to be a rhythm and blues star in the US. Minato is a strong believer in family: If Hiroko was going to find fame and fortune in the US, Dad had better be there to help manage her. He suceeded in helping Hiroko to achieve a UK dance chart number one hit in 1995.

In 1996 Minato returned to Japan and his magnetic motor project. The following year he displayed his prototypes to national power companies, government officials and others at a five-day conference in Mexico City. Interest was palpable, and Minato realized that his invention might meet a global need for energy-saving devices.

Subsequent previews and speeches in Korea and Singapore further consolidated his commitment to bringing the invention to fruition, and he was able to bring in several early-stage investors.

During the late 90s, Minato continued to refine his prototypes. He also stayed in constant contact with his lawyer, registering patents in major countries around the world. Through his experiences in the US he realized that legal protection was critical, even if it meant delaying release of the technology by a couple of years.

Ironically, by the time he'd won patents in 47 countries, the Japanese patent office turned him down on the grounds that "[the invention] couldn' t possibly work" and that somehow he was fabricating the claims.

But a few months later they were forced to recant their decision after the US patent office recognized his invention and gave him the first of two patents. As Minato notes: "How typical of Japan's small-minded bureaucrats that they needed the leadership of the US to accept that my invention was genuine."

By 2001, the Minatos had refined their motors and met enough potential investors to enter into a major international relationship, initially with a Saudi company, to be followed thereafter by companies in the US and elsewhere.

However, fate dealt the investors and Minato's business a serious blow when the World Trade Center was attacked in New York. The Saudis retreated, and Minato's plans fell back to square one.

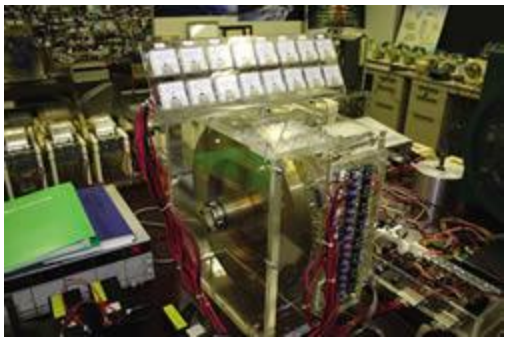
Now Minato is once again ready to move. With the first order in the works and more orders pending successful prototypes, he has decided that investors don't have to be primary partners. He is actively accepting inquiries from corporate investors who can bring strategic advantages and corporate credibility with them. His company, Japan Magnetic Fan, will make a series of investment tie-up announcements in the first and second quarters of 2004.

Implications ~

Minato's motors consume just 20 percent or less of the power of conventional motors with the same torque and horse power. They run cool to the touch and produce almost no acoustic or electrical noise. They are significantly safer and cheaper (in terms of power consumed), and they are sounder environmentally.

The implications are enormous. In the US alone, almost 55 percent of the nation's electricity is consumed by electric motors. While most factory operators buy the cheapest motors possible, they are steadily being educated by bodies like NEMA (National Electrical Manufacturers Association) that the costs of running a motor over a typical 20-year lifespan comprise a purchase price of just 3 percent of the total, and electricity costs of 97 percent. It is not unusual for a $2,000 motor to consume $80,000 of electricity (at a price of .06 cents per kilowatt hour).

Since 1992, when efficiency legislation was put into place at the US federal level, motor efficiency has been a high priority -- and motors saving 20 percent or so on electrical bills are considered highly efficient. Minato is about to introduce a motor which saves 80 percent, putting it into an entirely new class: The $80,000 running cost will drop to just $16,000. This is a significant savings when multiplied by the millions of motors used throughout the USA and Japan -- and eventually, throughout the world.



The Devices ~

Minato's invention and its ability to use remarkably less power and run without heat or noise make it perfect for home appliances, personal computers, cellphones (a miniature generator is in the works) and other consumer products.

The magnetic motor will be cheaper than a standard motor to make, as the rotor and stator assemblies can be set into plastic housings, due to the fact that the system creates very little heat. Further, with the motor's energy efficiency, it will be well suited for any application where a motor has limited energy to drive it. While development is still focused on replacing existing devices, Minato says that his motor has sufficient torque to power a vehicle.

With the help of magnetic propulsion, it is feasible to attach a generator to the motor and produce more electric power than was put into the device. Minato says that average efficiency on his motors is about 330 percent.

Mention of Over Unity devices in many scientific circles will draw icy skepticism. But if you can accept the idea that Minato's device is able to create motion and torque through its unique, sustainable permanent magnet propulsion system, then it makes sense that he is able to get more out of the unit than he puts in in terms of elctrical power. Indeed, if the device can produce a surplus of power for longer periods, every household in the land will want one.

"I am not in this for the money," Minato says. "I have done well in my musical career, but I want to make a contribution to society -- helping the backstreet manufacturers here in Japan and elsewhere. I want to reverse the trends caused by major multinationals. There is a place for corporations. But as the oil industry has taught us, energy is one area where a breakthrough invention like this cannot be trusted to large companies."

Minato was once close to making a deal with Enron. But today, he is firmly on a mission to support the small and the independent -- and to go worldwide with them and his amazing machine. "Our plan is to rally smaller companies and pool their talent, and to one day produce the technology across a wide range of fields."

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US Patent # 4,751,486

(Cl. 335/272)

Magnetic Rotation Apparatus

(June 14. 1998)

Kohei Minato

Abstract --- The magnetic rotation apparatus of the present invention has first and second rotors rotatably supported and juxtaposed. The first and second rotors are connected so as to be rotatable in opposite directions in a cooperating manner. A number of permanent magnets are arranged on a circumferential portion of the first rotor at regular intervals, and just as many permanent magnets are arranged on a circumferential portion of the second rotor at regular intervals. Each permanent magnet has one magnetic polarity located radially outward from the rotors, and has the other magnetic polarity located radially inward toward the rotors. The polarity of each permanent magnet, which is located radially outward from the rotors, is identical. When the first and second rotors are rotated in a cooperating manner, the phase of rotation of the permanent magnets of one rotor is slightly advanced from that of the permanent magnets of the other rotor. One of the permanent magnets of one rotor is replaced with the electromagnet. The radially outward polarity of the electromagnet can be changed by reversing the direction in which a current is supplied to the electromagnet.

***Claims* ~** [Claims not included here]

Description

TECHNICAL FIELD

The present invention relates to a magnetic rotation apparatus in which a pair of rotors are rotated by utilizing a magnetic force.

BACKGROUND ART

An electromotor is well known as a rotation apparatus utilizing a magnetic force. For example, an AC electromotor comprises a rotor having a coil, a stator surrounding the rotor, and a plurality of electromagnets, disposed on the stator, for generating a rotating magnetic field. An electric power must be constantly supplied to the electromagnets in order to generate the rotating magnetic field and keep the rotor rotating, i.e., an external energy, or electric energy, is indispensable for the rotation of the rotor.

Under the circumstances, a magnetic rotation apparatus, which employs permanent magnets in lieu of electromagnets and can rotate a rotor only by a magnetic force of the permanent magnets, is highly desirable.

The present application proposes a magnetic rotation apparatus which comprises a pair of rotors rotatable in opposite directions in a cooperating manner, and a plurality of permanent magnets stationarily arranged at regular intervals on the peripheral portion of each rotor. One end portion of each permanent magnet of both rotors, which has the same polarity, is located radially outward of the rotors. When the two rotors are rotated in a cooperating fashion, a permanent magnet on one rotor and a corresponding permanent magnet on the other, which form a pair, approach and move away from each other periodically. In this case, the phase of rotation of the magnet on one rotor advances a little from that of the corresponding magnet on the other rotor. When the paired permanent magnets approach each other, magnetic repulsion causes one rotor to rotate. The rotation of one rotor is transmitted to the other rotor to rotate the same. In this manner, other pairs of magnets on both rotors sequentially approach each other, and magnetic repulsion occurs incessantly. As a result, the rotors continue to rotate.

In the above apparatus, in order to stop the rotation of the rotors, a brake device is required. If an ordinary brake device is mounted on the magnetic rotation apparatus, the entire structure of the apparatus becomes complex, and a driving source for the brake device must be provided separately.

The present invention has been developed in consideration of the above circumstances, and its object is to provide a magnetic rotation apparatus including a brake device for suitably stopping the rotation of rotors.

DISCLOSURE OF THE INVENTION

The magnetic rotation apparatus of the present invention is provided with magnetic force conversion means which is substituted for at least one pair of permanent magnets of the paired rotors. In a normal state, the magnetic force conversion means causes a magnetic repulsion, as in the other pairs of permanent magnets. When it is intended for the rotors to stop, the magnetic force conversion means causes a magnetic attraction force. Since a magnetic attraction force can be produced between the rotors at any time, the magnetic attraction force serves to stop the rotors. The brake device constituted by the magnetic force conversion means differs from an ordinary brake device which forcibly stops a pair or rotors by using a frictional force. In the brake device of this invention, by converting a magnetic repulsion force to a magnetic attraction force, the rotors can be braked in the state that the movement of the rotors is reduced. Thus, the rotors can be stopped effectively.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic perspective view showing a magnetic rotation apparatus according to an embodiment of the invention;

FIG. 1

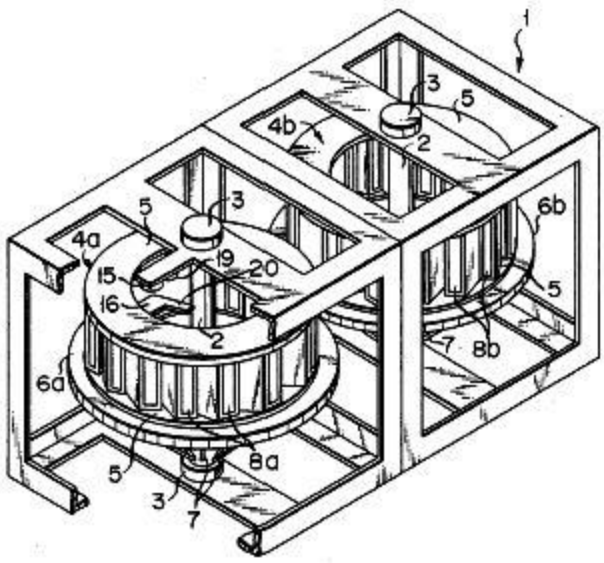


FIG. 2

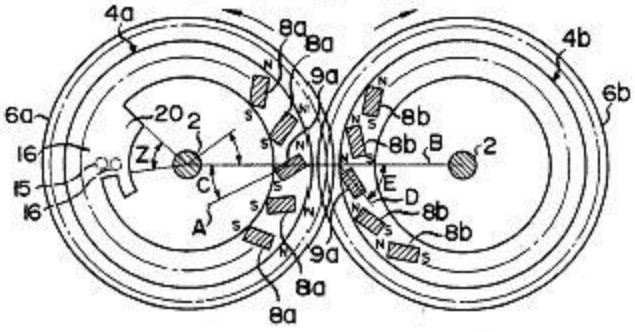
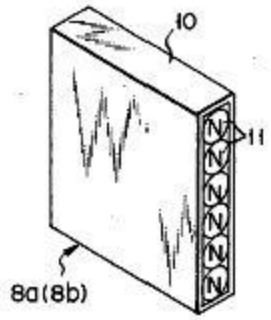


FIG. 3 is a perspective view of a permanent magnet;

F I G. 3



F I G. 4

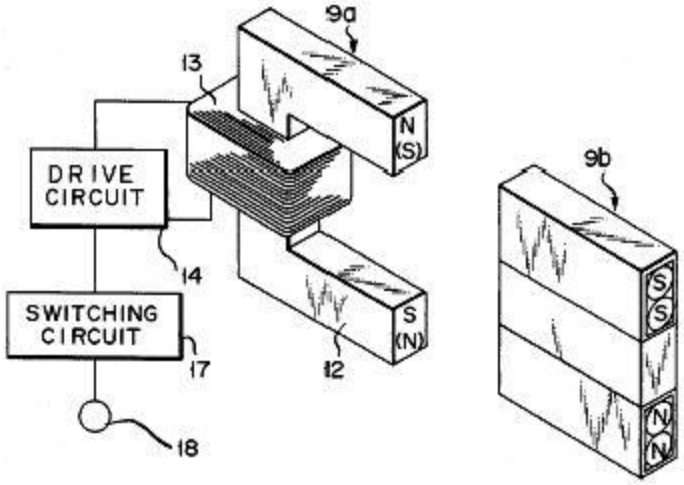
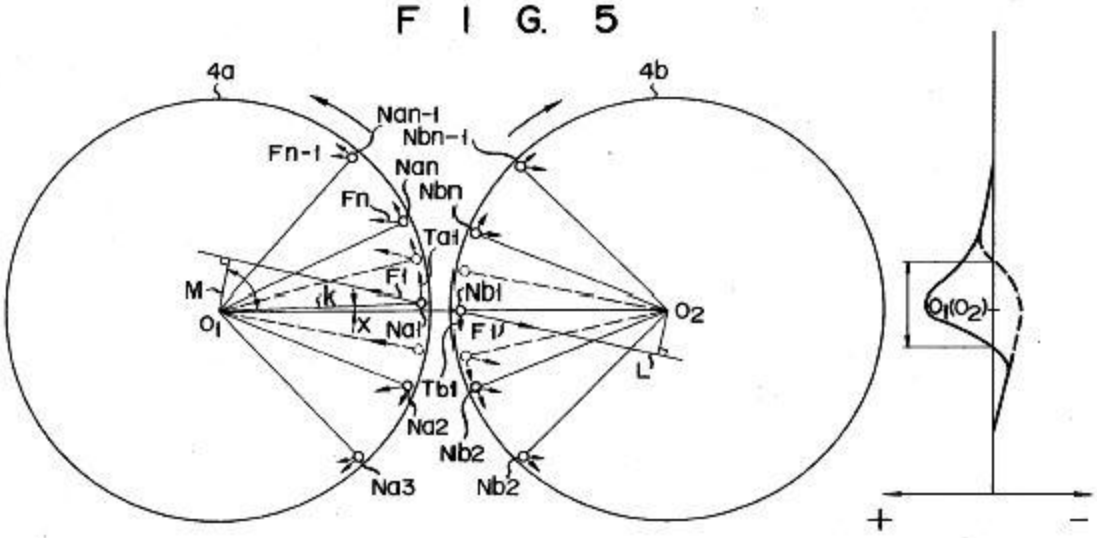


FIG. 4 shows an electromagnet, a permanent magnet cooperating with the electromagnet, and a driving circuit the electromagnet; and

FIG. 5 is a view for explaining how a pair of rotors rotate.

FIG. 5



BEST MODE OF CARRYING OUT THE INVENTION

FIG. 1 shows a magnetic rotation apparatus embodying the present invention. The magnetic rotation apparatus has frame 1. Frame 1 is provided with a pair of rotation shafts 2 which extend vertically and in parallel to each other. Shafts 2 are located at a predetermined distance from each other. Upper and lower ends of each shaft 2 are rotationally supported on frame 1 via bearing 3.

First rotor 4a is mounted on one of rotation shafts 2, second rotor 4b is mounted on the other rotation shaft 2. First and second rotors 4a and 4b are arranged on the same level. Rotors 4a and 4b have similar structures. For example, each rotor 4a (4b) comprises two ring-shaped plates 5 which are spaced apart from each other in the axial direction of the rotation shaft 2.

Gears 6a and 6b made of synthetic resin are, as cooperating means, attached to lower surfaces of first and second rotors 4a and 4b. The diameters of gears 6a and 6b are identical but larger than those of rotors 4a and 4b. Gears 6a and 6b mesh with each other. First and second rotors 4a and 4b are thus rotatable in opposite directions in a cooperating manner. In FIG. 1, reference numeral 7 indicates support arms for supporting first and second rotors 4a and 4b.

For example, 16 magnets are arranged at regular intervals on a peripheral portion of first rotor 4a. These magnets are secured between two ring-shaped plates 5. In this embodiment, among the 16 magnets, one is electromagnet 9a (see FIG. 2), and the others are permanent magnets 8a. FIG. 2 shows only some of permanent magnets 8a.

As shown in FIG. 3, permanent magnet 8a comprises case 10, and a plurality of rod-like ferromagnetic members 11 housed in case 10. Ferromagnetic member 11 is, for example, a ferrite magnet. Ferromagnetic members 11 of each permanent magnet 8a are arranged such that ferromagnetic members 11 have the same polarity at one end. In first rotor 4a, for example, an N-polarity end portion of each permanent magnet 8a faces radially outward, and an S-polarity end portion of magnet 8a faces radially inward. As shown in FIG. 2, when each permanent

magnet 8a is located between two shafts 2, angle C formed by longitudinal axis A of magnet 8a and imaginary line B connecting two shafts 2 is, for example, set to 30.degree. C. On the other hand, electromagnet 9a is, as shown in FIG. 4, constituted by U-shaped iron core 12, and coil 13 wound around core 12. Electromagnet 9a is arranged such that both N- and S-polarity end portions face radially outward of first rotor 4a, and the above-mentioned angle C is formed, similarly to the case of permanent magnet 8a.

The same number of permanent magnets (8b,9b) as the total number of all permanent magnets and electromagnet (8a,9a) of first rotor 4a are secured on a peripheral portion of second rotor 4b at regular intervals. In FIG. 2, when first and second rotors 4a and 4b are rotated in opposite directions, each permanent magnet of second rotor 4b periodically moves toward and away from the corresponding one of the magnets (8a,9a) of first rotor 4a.

The permanent magnets (8b,9b) of second rotor 4b will now be described in greater detail. Permanent magnets 8b of second rotor 4b, which periodically move toward and away from permanent magnets 8a of first rotor 4a in accordance with the rotation of rotors 4a and 4b, have a structure similar to that of permanent magnets 8a of first rotor 4a. The polarity of that end portion of each permanent magnet 8b which is located radially outward from second rotor 4b, is identical with that of the end portion of each permanent magnet 8a of first rotor 4a. That is, the radially outward portion of each permanent magnet 8b has an N-polarity.

Permanent magnet 9b of second rotor 4b, which periodically moves toward and away from electromagnet 9a of first rotor 4a, has a structure shown in FIG. 4. Permanent magnet 9b has a structure similar to that of permanent magnets 8a. Both polarities of electromagnet 9a face radially outward from first rotor 4a. Permanent magnet 9b has two different polarities which face radially outward from second rotor 4b and correspond to both polarities of electromagnet 9a.

As shown in FIG. 2, when each permanent magnet 8b,9b is located between two rotation shafts 2, angle E formed by longitudinal axis D of the magnet (8b,9b) and imaginary line B connecting two shafts 2 is, for example, set to 56.degree. C. In addition, when rotors 4a and 4b are rotated in opposite directions, as shown by arrows, the magnets (8a,9a) of first rotor 4a move a little ahead of the corresponding permanent magnets (8b,9b) of second rotor 4b, in a region in which both magnets (8a,9a; 8b,9b) approach one another. In other words, the phase of rotation of the magnets (8a,9a) of first rotor 4a advances by a predetermined angle in relation to the permanent magnets (8b,9b) of second rotor 4b.

As shown in FIG. 4, electromagnet 9a of first rotor 4a is electrically connected to drive circuit 14. Drive circuit 14 includes a power source for supplying an electric current to coil 13 of electromagnet 9a. While rotors 4a and 4b rotate, drive circuit turns on electromagnet 9a upon receiving a signal from first sensor 15 only when electromagnet 9a and permanent magnet 9b are in a first region in which they periodically approach each other. First sensor 15 is an optical sensor comprising a light-emitting element and a light-receiving element. As shown in FIG. 1, first sensor 15 is attached to a portion of frame 1 above first rotor 4a. First sensor 15 emits light in a downward direction. The light is reflected by reflection plate 16 projecting radially inward from the inner edge of first rotor 4a. First sensor 15 receives the reflected light, and feeds a signal to drive circuit 14. Thus, drive circuit 14 turns on electromagnet 9a.

The circumferential length of reflection plate 16 is equal to that of the above-mentioned first region. When magnets 9a and 9b enter the first region, first sensor 15 is turned on, and when they leave the first region, first sensor 15 is turned off. When drive circuit 14 receives a signal from first sensor 15, it excites electromagnet 9a such that both polarities of electromagnet 9a correspond to those of permanent magnet 9b of second rotor 4b.

Drive circuit 14 is electrically connected to switching circuit 17. When brake switch 18 is operated, switching circuit 17 reverses the direction in which an electric current is supplied to electromagnet 9a. When the current supplying direction of drive circuit 14 is reversed, drive circuit 14 excites electromagnet 9a only in a time period in which drive circuit 14 receives a signal from second sensor 19. Second sensor 19 has a structure similar to that of first sensor 15, and is attached to frame 1 so as to be located closer to the center of rotor 4a than first sensor 15. Reflection plate 20, which corresponds to the position of second sensor 19, is formed integral to an inner edge portion of reflection plate 16. As shown in FIG. 2, compared to reflection plate 16, reflection plate 20 extends in rotational direction of first rotor 4a, indicated by the arrow.

The operation of the above-described magnetic rotation apparatus will now be explained with reference to FIG. 5.

In FIG. 5, rotation shaft 2 of first rotor 4a is denoted by 01, and rotation shaft 2 of second rotor 4b is denoted by 02. Only the radially outward polarity, that is, N-polarity, of the magnets of rotors 4a and 4b is shown, for the sake of convenience. Although electromagnet 9a and permanent magnet 9b have both polarities located radially outward, only the N-polarity thereof is shown.

When first and second rotors 4a and 4b are put in a position shown in FIG. 5, magnetic pole Nb1 of one permanent magnet of second rotor 4b is located in a line connecting shafts 01 and 02. In this case, polarity Na1 of first rotor 4a, which is paired with polarity Nb1, is a little advanced from polarity Nb1 in the rotational direction of first rotor 4a. For example, as shown in FIG. 5, magnetic pole Na1 is advanced from polarity Nb1 by an angle of X.degree.. Polarities Na1 and Nb1 exert repulsion force F1 upon each other along line L. Supposing that an angle, formed by line M, which is drawn from shaft 01 perpendicularly to line L, and the line connecting shafts 01 and 02 is represented by Y, and that the length of line K is represented by R, torques Ta1 and Tb1 caused by repulsion force F1 to rotate first and second rotors 4a and 4b can be given by:

Ta1=F1.multidot.R.multidot.cos (Y-X)

Tb1=F1.multidot.R.multidot.cos Y

Since cos (Y-X)>cos Y, Ta1>Tb1.

As shown in FIG. 5, since magnetic pole Na1 is advanced from magnetic pole Nb1 by angle X.degree., first rotor 4a receives a greater torque than second rotor 4b. Thus, first rotor 4a forwardly rotates in the direction of the arrow in FIG. 5.

Mention is now made of paired magnets of rotors 4a and 4b in the vicinity of magnetic poles Na1 and Nb1. Magnetic poles Nan and Nan-1 of first rotor 4a are advanced ahead of magnetic pole Nal in the rotational direction. Magnetic poles Nan and Nan-1 receive a torque produced by a repulsion force acting between magnetic poles Nan and Nan-1 and corresponding magnetic poles Nbn and Nbn-1. In FIG. 5, magnetic poles Nan and Nan-1 receive a smaller torque, as they rotate farther from the location of magnetic pole Na1. It is well known that a torque of first rotor 4a, which is caused by a repulsion force acting on magnetic poles Nan and Nan-1, is decreased in inverse proportion to the square of the distance between paired magnetic poles Na and Nb.

Magnetic poles Na2 and Na3, behind magnetic pole Na1, receive a torque which tends to rotate rotor 4a in the reverse direction. This torque is considered to be counterbalanced with the torque acting on magnetic poles Nan and Nan-1.

In FIG. 5, attention should be paid to the region of magnetic poles Na1 and Na2. As first rotor 4a forwardly rotates, the direction in which a torque applies to magnetic pole Na2, is changed from the reverse direction to the forward direction, before magnetic pole Na2 reaches the position of magnetic pole Na1. The torque for forwardly rotating rotor 4a is larger than that for reversely rotating rotor 4a. Therefore, first rotor 4a is easily rotated in the direction shown in FIG. 2.

Second rotor 4b is considered to receive a torque in a direction reverse to the direction shown in FIG. 2, as seen from the description of first rotor 4a. It is obvious that second rotor 4b receives a maximum torque at the position of magnetic pole Nb1. As seen from the above formula, torque Tb1 applied to second rotor 4b in a direction reverse to that denoted by the arrow is smaller than torque Ta1 applied to first rotor 4a in the forward direction. The rotation of first rotor 4a is transmitted to second rotor 4b through gears 6a and 6b. By determining the relationship between the strengths of torques Ta1 and Tb1, second rotor 4b is thus rotated in a direction reverse to the rotational direction of first rotor 4a, against the torque applied to second rotor in the direction. As a result, first and second rotors 4a and 4b are kept rotating, since a torque for rotating rotors 4a and 4b in a cooperating manner is produced each time magnetic poles Na of first rotor 4a pass across the line connecting shafts 01 and 02.

In a diagram shown in the right part of FIG. 5, a solid line indicates a torque applied to first rotor 4a, and a broken line indicates a torque applied to second rotor 4b. The ordinate indicates a distance between each magnetic pole and the line connecting shafts 01 and 02 of rotors 4a and 4b. The first region in which electromagnet 9a of first rotor 4a is turned on is set in a range of Z during which a torque is applied to first rotor 4a in the forward direction.

In order to stop the cooperative rotation of rotors 4a and 4b, brake switch is turned on to operate switching circuit 17. Thus, the direction in which drive circuit 14 supplies a current to electromagnet 9a is reversed. The polarities of electromagnet 9a are reversed. The torque applied to electromagnet 9a in the forward direction is stopped. When electromagnet 9a approaches permanent magnet 9b, a magnetic attract:on force is produced. As a result, the rotation of rotors 4a and 4b is effectively slowed down and stopped. Since the second region, in which electromagnet 9a is excited, is larger than the first region, a large braking force can be obtained from a magnetic attraction force.

In the above embodiment, since electromagnet 9a is excited only in a specific region, a large electric power is not required. In addition, since electromagnet 9a rotates and brakes rotors 4a and 4b, a braking mechanism for a magnetic rotation apparatus can be obtained without having to make the entire structure of the apparatus complex.

The present invention is not restricted to the above embodiment. With the exception of the paired electromagnet and permanent magnet, all permanent magnets of the rotors are arranged such that their end portions of the same polarity face radially outward from the rotors. However, it is possible that the polarities of the radially outward end portions of the permanent magnets are alternately changed. Namely, it should suffice if the polarities of the radially outward end portions of the first rotor are identical to those of the corresponding radially outward end portions of the second rotor. The magnets may have different magnetic forces. Furthermore, an electric power for exciting the electromagnet can be derived from the rotation of the rotors or from the revolving magnetic field of the permanent magnet.

Angles C and E are not restricted to 30.degree. and 56.degree.. They may be freely determined in consideration of the strength of the magnetic force of the permanent magnet, a minimum distance between adjacent magnets, angle x, and the like. The number of magnets of the rotor is also freely chosen.

Industrial Applicability ~

As described above, the magnetic rotation apparatus of the present invention can be used as a driving source in place of an electric motor, and as an electric generator.

US Patent # 5,594,289 (Cl. 310/152)

Magnetic Rotating Apparatus

(January 14, 1997)

Kohei Minato

Abstract --- On a rotor which is fixed to a rotatable rotating shaft, a plurality of permanent magnets are disposed along the direction of rotation such that the same magnetic pole type thereof face outward. In the same way, balancers are disposed on the rotor for balancing the rotation of this rotor. Each of the permanent magnets is obliquely arranged with respect to the radial direction line of the rotor. At the outer periphery of the rotor, an electromagnet is disposed facing this rotor, with this electromagnet intermittently energized based on the rotation of the rotor. According to the magnetic rotating apparatus of the present invention, rotational energy can be efficiently obtained from permanent magnets. This is made possible by minimizing as much as possible current supplied to the electromagnets, so that only a required amount of electrical energy is supplied to the electromagnets.

Claims **---** [Claims not included here]

Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a magnetic rotating apparatus, and more particularly, to a magnetic rotating apparatus which utilizes repulsive forces produced between a permanent magnet and an electromagnet.

2. Description of the Prior Art

In a conventional electric motor, an armature as a rotor consists of turns of wires, and electric field as a stator consists of a permanent magnet. In such the conventional electric motor, however, current must be usually supplied to windings of the armature which is rotated. When the current is supplied, heat is generated, which gives rise to the problem that not much driving force is efficiently generated. This, in turn, gives wise to the problem that the magnetic forces cannot be efficiently obtained from the permanent magnet.

In addition, in the conventional electric motor, since the armature is so constructed as consisting of the windings, the moment of inertia cannot be made very high, so that enough torque cannot be obtained.

To overcome the above-described problems of such the conventional electric motor, the inventor proposed, in Japanese Patent Publication No. 61868/1993 (U.S. Pat. No. 4,751,486) a magnetic rotating apparatus in which a plurality of the permanent magnets are disposed along the two rotors, respectively, at a predetermined angle, and in which an electromagnet is disposed at one of the rotors.

In a generally constructed conventional electric motor, there is a limit as to how much the efficiency of energy conversion can be increased. In addition, the torque of the electric motor cannot be made high enough. For the above reasons, hitherto, various improvements have been made on existing electric motors, without any success in producing an electric motor so constructed has providing satisfactory characteristics.

In the magnetic rotating apparatus disclosed in Japanese Patent Publication No. 6868/1993 (U.S. Pat. No. 4,751,486) a pair of rotors is rotated. Therefore, it is necessary for each of the rotors to have high precision, and in addition, measures must be taken for easier rotation control.

SUMMARY OF THE INVENTION

In view of the above-described problems, the object of the present invention is to provide a magnetic rotating apparatus in which rotational energy can be efficiently obtained from the

permanent magnet with a minimum amount of electrical energy, and in which rotation control can be carried out relatively easily.

According to one aspect of the present invention, there is provided a magnetic rotating apparatus comprising a rotating shaft; a rotor which is fixed to the rotating shaft and which has disposed thereon permanent magnet means and means for balancing rotation, the permanent magnet means being disposed such that a plurality of magnetic poles of one (or first) polarity type is arranged along an outer peripheral surface in the direction of rotation, and a plurality of magnetic poles of the other (or second) polarity type arranged along an inner peripheral surface, with each pair of corresponding magnetic poles of one and the other polarities obliquely arranged with respect to a radial line; electromagnet means, which is disposed facing this rotor, for developing a magnetic field which faces the magnetic field of the permanent magnet means of the rotor and detecting means for detecting rotating position of the rotor to allow the electromagnet means to be energized.

According to another aspect of the present invention, there is provided a magnetic rotating apparatus comprising a rotating shaft a rotor which is fixed to the rotating shaft and which has disposed thereon a plurality of permanent magnets and balancers for balancing rotation, the permanent magnets being disposed such that one magnetic polarity type is arranged along an outer peripheral surface in the direction of rotation and the other magnetic polarity type arranged along an inner peripheral surface, with each pair of corresponding magnetic poles of one and the other polarities obliquely arranged with respect to a radial line; an electromagnet, which is disposed facing this rotor, for developing a magnetic field which produces the other magnetic polarity type on the facing surface; and energizing means for intermittently energizing the electromagnet means from where the leading permanent magnet, based on the rotation of the rotor, passes the facing surface of the electromagnet in the direction of rotation.

According to still another aspect of the present invention, there is provided magnetic rotating apparatus comprising a rotating shaft; a first rotor which is fixed to the rotating shaft and which has disposed thereon permanent magnet means and means for balancing rotation, the permanent magnet means being disposed such that a plurality of magnetic poles of the second polarity type is arranged along an outer peripheral surface in the direction of rotation, and a plurality of magnetic poles of the first pole type arranged along an inner peripheral surface, with each pair of corresponding magnetic poles of one and the other polarities obliquely arranged with respect to a radial line; a second rotor which rotates along with the first rotor and is fixed to the rotating shaft, having disposed thereon a plurality of permanent magnets and balancers for balancing rotation, the permanent magnets being disposed such that one magnetic polarity type is arranged along an outer peripheral surface in the direction of rotation and the other magnetic polarity type arranged along an inner peripheral surface, with each pair of corresponding magnetic poles of one and the other polarities obliquely arranged with respect to a radial line a first and a second electromagnet means, which are magnetically connected and disposed facing the first and second rotors, respectively, for developing a magnetic field which faces the magnetic field of the permanent magnet means of the first and second rotors; and detecting means for detecting rotating position of the rotors to allow the electromagnet means to be energized.

The nature, principle and utility of the invention will become more apparent from the following detailed description when read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

FIG. 1 is a perspective view schematically illustrating a magnetic rating apparatus according to one embodiment of the present invention

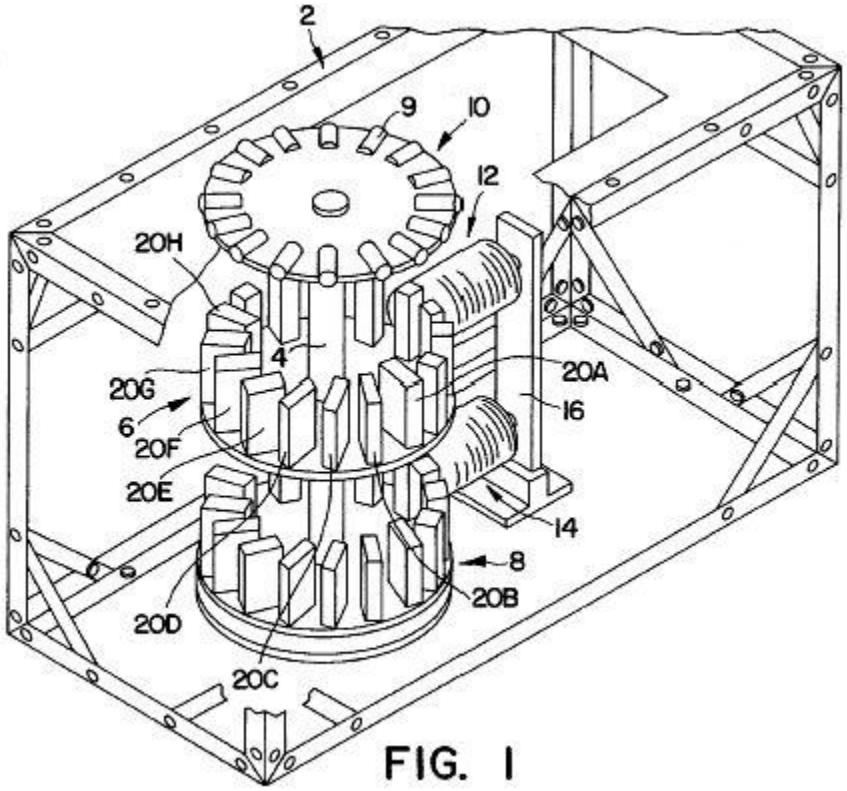


FIG. 1

FIG. 2 is a side view of the magnetic rotating apparatus illustrated in FIG. 1;

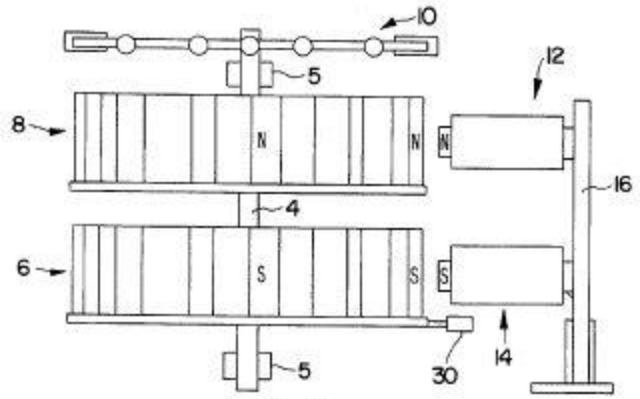


FIG. 2

FIG. 3 is a plan view of a rotor of the magnetic rotating apparatus illustrated in FIGS. 1 and 2;

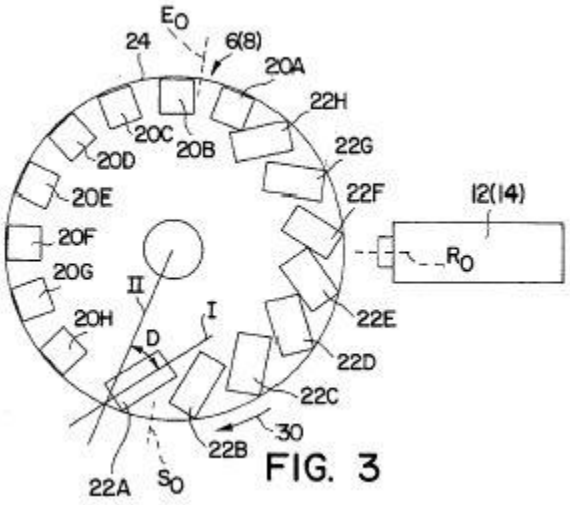


FIG. 3

FIG. 4 is a circuit diagram illustrating a circuit in the magnetic rotating apparatus shown in FIG. 1;

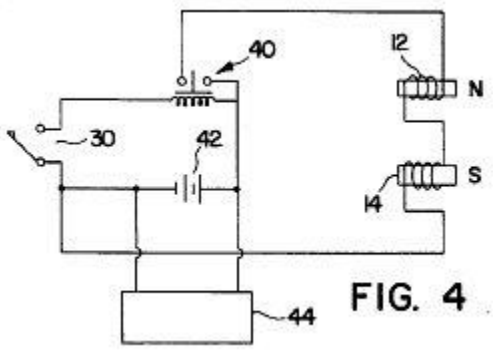


FIG. 4

FIG. 5 is a plan view showing a magnetic field distribution formed between the rotor and the electromagnet of the magnetic rotating apparatus shown in FIGS. 1 and 2, and

FIG. 6 is an explanatory view illustrating a torque which causes rotation of the rotor of the magnetic rotating apparatus shown in FIGS. 1 and 2.

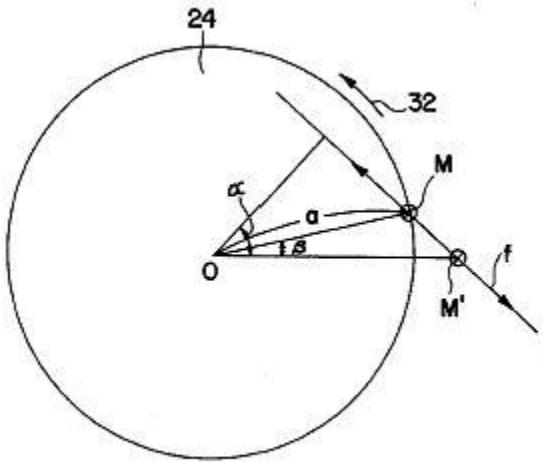


FIG. 6

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The magnetic field developed by an electromagnet means and that of a permanent magnet means of a rotor repel each other. In addition, the magnetic field of the permanent magnet means is flattened by the magnetic fields of other nearby permanent magnets and electromagnet means. Therefore, a torque is produced therebetween to efficiently rotate the rotor. Since the rotor has a high inertial force, when the rotor starts rotating, its speed increases by the inertial force and the turning force.

A magnetic rotating apparatus related to one embodiment of the present invention will be described with reference to the following drawings.

FIGS. 1 and 2 are schematic diagrams of a magnetic rotating apparatus related to one embodiment of the present invention. In the specification, the term "magnetic rotating apparatus" will include an electric motor, and from its general meaning of obtaining turning force from the magnetic forces of permanent magnets, it will refer to a rotating apparatus utilizing the magnetic forces. As shown in FIG. 1, in the magnetic rotating apparatus related to one embodiment of the present invention, a rotating shaft 4 is rotatably fixed to a frame 2 with bearings 5. To the rotating shaft 4, there are fixed a first magnet rotor 6 and a second magnet rotor 8, both of which produce turning forces and a rotated body 10, which has mounted therealong a plurality of rod-shaped magnets 9 for obtaining the turning forces as energy. They are fixed in such a manner as to be rotatable with the rotating shaft 4. At the first and second magnet rotors 6 and 8, there are provided, as will be described later in detail with reference to FIGS. 1 and 2, a first electromagnet 12 and a second electromagnet 14 respectively are energized in synchronism with rotations of the first and second magnet rotors 6 and 8, both of which face each other and are each disposed in a magnetic gap. The first and second electromagnets 12 and 14 are respectively mounted to a yoke 16, which forms a magnetic path.

As shown in FIG. 3, the first and second magnet rotors 6 and 8 each have disposed on its disk-shaped surface a plurality of tabular magnets 22A through 22H for developing a magnetic field for generating the turning forces and balancers 20A through 20H, made of non-magnetic substances, for balancing the magnet rotors 6 and 8. In the embodiments, the first and second magnet rotors 6 and 8 each have disposed along the disk-shaped surface 24 at equal intervals the eight tabular magnets 22A through 22H along half of the outer peripheral area and +the eight balancers 20A through 20H along the other half of the outer peripheral area.

As shown in FIG. 3, each of the tabular magnets 22A through 22H are disposed so that its longitudinal axis 1 makes an angle D with respect to a radial axis line 11 of the disk-shaped surface 24. In the embodiment, an angle of 30 degrees and 56 degrees have been confirmed for the angle D. An appropriate angle, however, can be set depending on the radius of the disk-shaped surface 24 and the number of tabular magnets 22A through 22H to be disposed on the disk-shaped surface 24. As illustrated in FIG. 2, from the viewpoint of effective use of the magnetic field, it is preferable that the tabular magnets 22A through 22H on the first magnet rotor 6 are positioned so that their N-poles point outward, while the tabular magnets 22A through 22H on the second magnet rotor 8 are positioned so that their S-poles point outward.

Exterior to the first and second magnet rotors 6 and 8, the first and second electromagnets 12 and 14 are disposed facing the first and second magnet rotors 6 and 8 respectively in the magnetic gap. When the first and second electromagnets 12 and 14 are energized, they develop a magnetic field identical in polarity to the their respective tabular magnets 22A through 22H so that they repel one anther. In other words, as shown in FIG. 2, since the tabular magnets 22A through 22H on the first magnet rotor 6 have their N-poles facing outwards, the first electromagnet 12 is energized so that the side facing the first magnet rotor 6 develops an N-polarity. In a similar way, since the tabular magnets 22A through 22H on the second magnet rotor 8 have their S-poles facing outwards, the second electromagnet 14 is energized so that the side facing the tabular magnets 22A through 22H develops a S-polarity. The first and second electromagnets 12 and 14, which are magnetically connected by the yoke 16, are magnetized so that the sides facing their respective magnet rotors 6 and 8 are opposite in polarity with respect to each other. This means that the magnetic fields of the electromagnets 12 and 14 can be used efficiently.

A detector 30, such as microswitch, is provided to either one of the first magnet rotor 6 or second magnet rotor 8 to detect the rotating position of the magnet rotors 6 and 8. That is, as shown in FIG. 3, in a rotational direction 32 of the tabular magnets 22A through 22H, the first and the second magnet rotors 6 and 8 are respectively energized when the leading tabular 22A has passed. In other words, in the rotational direction 32, the electromagnet 12 or 14 is energized when starting point So, located between the leading tabular magnet 22A and the following tabular magnet 22B coincides with the center point Ro of either the electromagnet 12 or 14. In addition, as illustrated in FIG. 3, in the rotational direction 32 of the tabular magnets 22A through 22H, the first and the second magnet rotors 6 and 8 are de-energized when the last tabular magnet 22A has passed. In the embodiment, an end point Eo is set symmetrical to the starting point So on the rotating disk-shaped surface 24. When the end point Eo coincides with the center point Ro of either the electromagnet 12 or 14, the electromagnet 12 or 14 is de-energized, respectively. As will be described later, with the center point Ro of the electromagnet 12 or 14 arbitrarily set between the starting point So and the end point Eo, the magnet rotors 6

and 8 start to rotate when the electromagnets 12 and 14 and their tabular magnets 22A through 22H face one another. When a microswitch is used as the detector 30 for detecting the rotating position, the contact point of the microswitch is allowed to slide along the surface of the rotating disk-shaped surface 24. A step is provided for the starting point So and the end point Eo so that the contact of the microswitch closes between the starting point So and the end point Eo. The area along the periphery therebetween protrudes beyond the other peripheral areas of the rotating disk-shaped surface 24. It is apparent that a photo sensor or the like may be used instead of the microswitch as the detector 30 for detecting the rotating position.

As shown in FIG. 4, the windings of the electromagnets 12 and 14 are connected to a DC power source 42 through a movable contact of a relay 40, which is connected in series with the windings. A series circuit containing the relay 40 (solenoid) and the detector 30 or microswitch is connected to the DC power source 42. In addition, from the viewpoint of energy conservation, a charger 44 such as a solar cell is connected to the DC power source 42. It is preferable that the DC power source 42 is constantly chargeable using solar energy or the like.

In the magnetic rotating apparatus illustrated in FIGS. 1 and 2, a magnetic field distribution shown in FIG. 5 is formed between the tabular magnets 22A through 22H, disposed on each of the magnet rotors 6 and 8, and the electromagnets 12 and 14 which face them, respectively. When the electromagnet 12 or 14 is energized, a magnetic field of a tabular magnet of the tabular magnets 22A through 22H, adjacent to the electromagnet 12 or 14, is distorted in the longitudinal direction in correspondence with the rotational direction. This results in the generation of a repulsive force therebetween. As is apparent from the distortion of the magnetic field, the repulsive force has a larger component in the longitudinal or perpendicular direction, and produces a torque, as shown by an arrow 32. Similarly, a magnetic field of a tabular magnet of the tabular magnets 22A through 22H, which next enters the magnetic field of the electromagnet 12 or 14, is distorted. Since it moves toward an opposite pole of the preceding tabular magnet of the tabular magnets 22A through 22H, its magnetic field is distorted to a larger extent, and thereby flattened. This means that the repulsive force produced between the tabular magnets of the tabular magnets 22A through 22H, which have already entered the magnetic field of the electromagnets 12 or 14, is larger than the repulsive force developed between the next-entering tabular magnets of the tabular magnets 22A through 22H and the electromagnets 12 or 14. Accordingly, a turning force, shown by the arrow 32, acts upon the rotating disk-shaped surface 24. The rotating disk-shaped surface 24, having been imparted thereto turning force, continues to rotate due to inertial forces, even when it has been de-energized after the end point Eo has coincided with the center point Ro of the electromagnet 12 or 14. The larger the inertial force, the smoother the rotation.

At the initial stage of the rotation, an angular moment, as that shown in FIG. 6, is imparted to the rotating disk-shaped surface 24. That is, at the start of the rotation, as shown in FIG. 6, when the pole M of a tabular magnet is slightly displaced in the rotational direction from the pole M' of an electromagnet, a repulsive force operates between both of the poles M and M' of the tabular magnet at the rotating side and the electromagnet at the stationary side, respectively. Therefore, from the relationship illustrated in FIG. 6, an angular torque T is generated based on the formula: T=F. a.cos (.alpha.-.beta.), where in a is a constant. The angular torque starts the rotation of the rotating disk-shaped surface 24. After the rotating disk-shaped surface 24 has started rotating, its

rotating speed gradually increases due to an inertial moment thereof, which allows a large turning driving force to be produced. After a stable rotation of the rotating disk-shaped surface 24 has been produced, when a necessary electromotive force can be developed in an electromagnetic coil (not illustrated) by externally bringing it near a rotated body 10 to be rotated along with the rotating disk-shaped surface 24. This electric power can be used for other applications. This rotating principle is based on the rotating principle of the magnetic rotating apparatus already disclosed in Japanese Patent Publication No. 61868/1993 (U.S. Pat. No. 4,751,486) by the inventor. That is, even if an electromagnet, provided for one of the rotors of the magnetic rotating apparatus disclosed in the same Patent Application, is fixed, it is rotated in accordance with the rotating principle disclosed therein. For details, refer to the above Japanese Patent Publication No. 61868/1993 (U.S. Pat. No. 4,751,486).

The number of tabular magnets 22A through 22H is not limited to "8" as shown in FIGS. 1 and 3. Any number of magnets may be used. In the above-described embodiment, although the tabular magnets 22A through 22H are disposed along half of the peripheral area of the disk-shaped surface 24, and the balancers 20A through 20H are disposed along the other half of the peripheral area, the tabular magnets may further be disposed along other areas of the disk-shaped surface 24. It is preferable that balancers, in addition to magnets, are provided along a portion of the peripheral area on the disk-shaped surface. The counter weights, which do not need to be formed into separate blocks, may be formed into one sheet of plate which extends on the outer peripheral area of the disk-shaped surface. In addition, in the above-described embodiments, while the construction is such as to allow the electromagnets to be energized for a predetermined period of time for every rotation of the rotating disk-shaped surface, the circuit may be so constructed as to allow, upon increased number of rotations, energization of the electromagnets for every rotation of the rotating disk-shaped surface, starting from its second rotation onwards. Further, in the above-described embodiment, a tabular magnet has been used for the permanent magnet, but other types of permanent magnets may also be used. In effect, any type of magnet may be used as the permanent magnet means as long as a plurality of magnetic poles of one type is disposed along the outer surface of the inner periphery and a plurality of magnetic poles of the other type are disposed along the inner peripheral surface of the disk-shaped surface, so that a pair of corresponding magnetic poles of one and the other polarities is obliquely arranged, with respect to the radial line 11, as shown in FIG. 3.

Although the tabular magnets 22A through 22H are mounted on the magnet rotors 6 and 8 in the above embodiment, they may be electromagnets. In this case, the electromagnets 12 and 14 may be the alternative of electromagnets or permanent magnets.

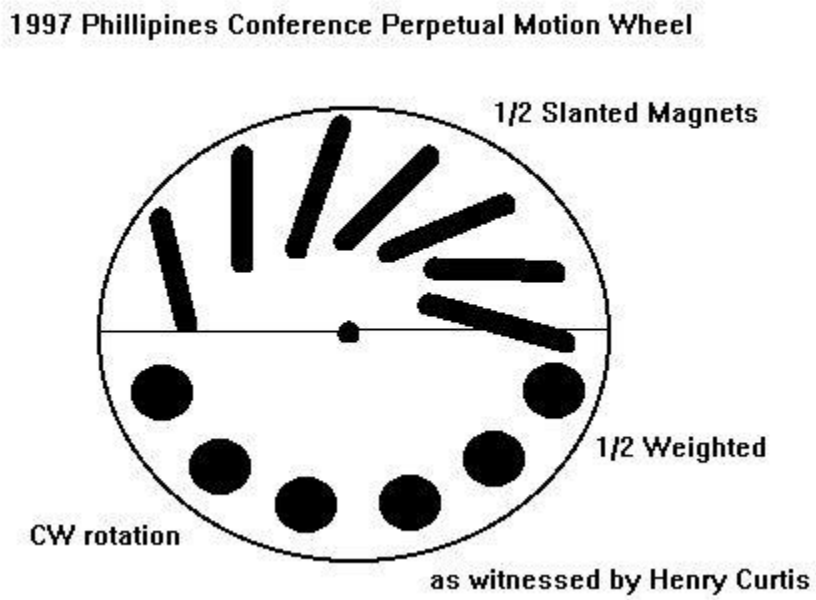
According to the magnetic rotating apparatus of the present invention, rotational energy can be efficiently obtained from permanent magnets. This is made possible by minimizing as much as possible current supplied to the electromagnets, so that only a required amount of electrical energy is supplied to the electromagnets.

It should be understood that many modifications and adaptations of the invention will become apparent to those skilled in the art and it is intended to encompass such obvious modifications and changes in the scope of the claims appended hereto.

KeelyNet: BBS Posting from Henry Curtis (11-18-1997)

Korean Magnetic Perpetual Motion Wheel

I must apologize for not having all the details of this interesting device but will update the file when I get more info from the source. In email communications with John Schnurer, I happened to mention it and he's been on me since then to send him a diagram, yet I felt like it would simply be confusing because its operation is not clear or readily apparent from the information I had.The information that I have comes directly from long time friend Henry Curtis of Colorado. We both attended the 1997 ISNE conference in Denver and Henry was telling about this interesting machine he had seen while on a trip to the Phillipines. He said there was a free energy conference held there and he noticed a spinning bicycle wheel that was attached to a stand that sat on a table.The wheel was running when he first saw it, yet there did not appear to be any driving force such as a motor, belts, gears, etc..Henry said he watched it for quite awhile and it never stopped running. On expressing curiosity about the wheel, he was invited to stop it and start it up without any outside assistance.Henry reports the wheel was brought to a complete stop, then he gave it a spin with his hand and it began moving on its own. I am uncertain if it followed the tendency of other such devices to establish its own speed. Some devices like this can be spun up to high speed from an outside source, then will slow to a speed which is determined by the geometry and strength of the repelling or attracting forces that operate it.Henry swears it was the neatest thing he'd ever seen and drew a crude diagram of the arrangement on my notepad. Unfortunately, we were a bit rushed and I did not achieve a complete understanding of how it operated. That is why I did not want to blow smoke about it until more detail had been received, god knows, we don't need any more of that.However, perhaps someone can figure it out from the limited information I do have. The following drawing shows the wheel arrangement, one half was weighted, the other half had slanted magnets. I do not know whether they are all repelling, attracting or a mix of these forces.



As you can imagine, the weight of the magnets must equal the weight of the other half of the wheel to balance out. Apparently the force of the magnetic repulsion or attaction provides the actual imbalance.Henry also said there was a patent on this device that is dated January 14, 1997. The inventor is a Japanese man named Minatu. The spelling of this name is uncertain. I did a search on the IBM server but found nothing even remote. Henry specifically said this was a United States patent. So, here it is. Perhaps Henry can come up with some more detail which can be used to update this file in future. Good luck....

KeelyNet: Update and Corrections from Henry Curtis (Wed, 19 Nov 1997) ~

From: Henry Curtis ~ *To:* Jerry Decker

Subject: Bicycle wheel correction and update Jerry, Again we see that communication is difficult and memories are fallable. Obviously I am remiss in not having sent this to you months ago as I intended to, but as a sage of old observed "The spirit is willing, but the flesh is slow." During the first weekend of May, 1997, a group in Soeul, Korea headed up by Mr. Chi San Park, held The First International New Energy Conference in Seoul, Korea. I attended this conference and gave a talk on various approcahes to free energy. It was at this conference in Seoul, Korea that I saw the bicycle wheel and had the opportunity to work with it unattended by anyone else.The inventor is Kohei Minato, a Japanese rock musician, who reports that he has spent a million dollars out of his own pocket developing magnetic motors, because the world needs a better source of energy. He has several patents in various countries. His latest patent that I am aware of is United States Patent # 5,594,289. His development efforts have gone in the general direction of the Adams motor which the above patent is similar to. He had a working prototype of this design at the conference and reported that it used 150 watts power input and produced 450 watts output on a sustained basis. About a year ago CNN (in the US) had a 10 minute segment about him and his motors. In this video he is shown demonstrating two of his magnetic motors. I have a copy of this film clip that he gave to me. I will make a copy and send it to you. Unfortunately, the editors were not attuned to technical details and the pictures of the running machines show little useful detail. The Phillipine connection that you mention is completely erroneous. It was in Korea. The drawing on the web site is essentially correct with the following exceptions. The counter weight is a single curved piece of aluminum covering 180 degrees. Each of the several individual magnets on the other half of the wheel are slightly asymmetric, crescent shaped and nested. They are magnetised end to end with the N poles out. The motor is actuated by moving the N pole of a large permanet magnet (the drive magnet) toward the wheel. As this magnet is moved toward the wheel, the wheel starts to spin. As the magnet is moved closer to the wheel it spins faster. The acceleration of the wheel is rapid. So rapid in fact, as to be startling. To put it another way I was very impressed. The motor works. And it works very well. In the film clip a slight pumping action of Minato's hand holding the magnet is apparent. When I braced my hand so that there was no pumping action, the motor still ran. In fact it seemed to run better. Pumping action by the hand held magnet is not the power that drives the motor. When the drive magnet is moved away from the wheel it coasts rather quickly to a stop and comes to rest in a manner typical of any spinning bicycle wheel. Again when the wheel is at rest and a large magnet is moved up to the wheel it starts to spin. At no time is it necessary to touch the wheel to get it to

rotate. Simply bring the N pole of a large magnet several inches from the wheel. The particular orientation of the wheel when it is at rest seems to have no effect on how well it starts to turn. Irrespective of how the wheel and the magnets on it are sitting; move the drive magnet near, it starts to spin. Move the magnet closer it spins faster. Move the magnet further away it slows up. The wheel was mounted on a stand made of aluminum angle pieces bolted together similar to the diagram in the above mentioned patent. The axle of the wheel was mounted parellel to the surface of the planet. I have attached a rough diagram of the wheel. Apparently the geometry of the magnets on the wheel is very important and subtle. I have built several small models none of which have shown the free energy effects of Minato's machine. The conference in Seoul was attended by several hundred people, most appeared to be under 40 and evenly divided between men and women. Presenters were from Korea, US, Japan, and China. Simultaneous translation was provided for all talks in the 3 day conference. Jerry, I hope this information is useful. I may be contacted by e-mail at mailto:hcurtis@mindspring.com or by phone at 303.344.1458.

KeelyNet: Email from Gene Mallove at *Infinite Energy* ~

I spoke to Bob Vermillion of Tri-Cosmos Development (Los Angeles, CA 310-284-3250 or fax 310-284-3260) today, just before he left for the three-day demonstrations of the Minato magnetic motor being held in Mexico City, Mexico on July 8, 9, 10th.Three (3) Minato Motors (MM), covered by US Patents # 5,594,289 (Jan 14, 1997) and # 4,751,486 (June 14, 1988), have been brought over from Japan. One was allegedly tested last evening by Grupo Bufete Industrial (supposedly one of the largest power generation construction companies in Mexico and South America). The company engineers were said (by Vermillion) to have measured an output /input ratio of 4.3 / 1. The printed literature, which I received in a Fedex packet from Vermillion states that the device can put out 500 watts (maximum) with an input of 34 watts.For those of you who wonder why the device is not self-sustaining -- oral info from Vermillion is that Minato *will* in the course of one of the demonstrations *remove the battery power supply* and let the device self-run -- presumably with a load. The press release makes no bones about the physics-busting character of the MM: "As rotations per minute (rpm's) increase, the electromagnetic consumption of the stator decreases. This phenomenon is in direct conflict with accepted laws of physics and is achieved through the repelling magnetic fields. It operates without heat, noise, or pollution of any kind. It can be produced in size from ultra-small to very large." It is said in the press release that applications from cell phones to laptop computers are under development. Vermillion told me of other parties who were planning to attend the demonstrations, which will be conducted both in public displays and with private party measurements. These include: ENRON, Bechtel, Tejas (a division of Shell Oil Corporation), Fluor Daniels, Kellogg Corp. .He told me that Hal Fox of New Energy News and the Fusion Information Center will be there (I confirmed with Hal that he will be there and will give us a full report.) I considered going myself (I was invited), but I trust Hal Fox to provide a full report -- he should be back this weekend. Mr. Kohei Minato will be there -- he has already arrived, I understand. He hand carried one of the motors that was already tested yesterday. The wealthy Japanese individual who owns Tri-Cosmos Dev. Co. is Mr. Charly Fujiki. Attendance is by invitation only, but let me here provide the Grupo Bufete numbers: (723-45-78 and Fax 723-47-18 in Mexico City). The exhibition will be in the Grupo Bufete Industrial building.The invitation says: "Mr. Minato, the inventor, will be present to

explain and demonstrate his remarkable breakthrough in technology to government and business leaders in Mexico. He will also discuss the possible use (and) application for various other industries, including a giant generator project, based on the principal mechanism being displayed."Daily demonstrations are from 10:30 am to Noon, 4:30 to 5:30 pm and 6 to 7:30 pm. A block diagram of the motor indicates that it is about 500 kg. An arrow indicates that its 500 watt output goes to a load -- schematically indicated as an array of light bulbs. The unit is within a cube 1.2 meters on edge.The diagram shows a solar panel(!!) providing input to the battery that powers the device - I supposes for completeness, but that is obviously silly in view of the claim. Vermillion assured me that this solar panel was not an essential part of the system. One of the two color brochures in the package shows the Minato motor with its charactersitic coils that have their pole faces toward the perimeters of permanent magnet containing wheels that are stacked on an axle. If you look at the thing quickly, you'd think you were looking at a steam turbine. The 1997 patent #5,594,289 states in its abstract: "On a rotor which is fixed to a rotatable rotating shaft, a plurality of permanent magnets are disposed along the direction of rotation such that the same magnetic pole type therof face outward. In the same way, balancers are disposed on the rotor for balancing rotation of this rotor. Each of the permanent magnets is obliquely arranged with respect to the radial direction line of the rotor. At the outer periphery of the rotor, an electromagnet is disposed facing this rotor, with this electromagnet intermittently energized based on the rotation of the rotor.According to the magnetic rotating apparatus of the present invention, rotational energy can be efficiently obtained from permanent magnets. This is made possible by minimizing as much as possible current supplied to the electromagnets, so that only a required amount of electrical energy is supplied to the electromagnets." It will be interesting, indeed, to learn what comes out of this.Perhaps the famous white rabbit disappearing down a hole, or maybe the birth of a revolution? We shall see.

Best wishes,
Dr. Eugene F. Mallove,
Editor-in-Chief Infinite Energy Magazine Cold Fusion Technology, Inc. -- http://www.infinite-energy.com
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KeelyNet: Response from STAG group on Minato Wheel (12-04-97) ~

To: Jerry ~ From: David Heard

Subject: Re: Howdy! Thanks for your mail regarding Minato's Rotation Aparatus. My apologies for the slight delay in replying. Yes, please feel free to put up a link to our site and the photos. I should explain that our group is not in any way conected with Mr. Minato himself. The group STAG is run by foreign scientists who are living in Japan with the aim of distrubuting information between themselves, improving links between Japan and the UK (and elsewhere) and of course to have the odd beer or two. We hold meetings every couple of months and invite speakers to speak on interesting or topical subjects. Mr. Minato was one of the speakers who

gave a presentation at one of our meetings. Hence the pictures. I also heard about the Korean conference, and saw a significant report written about it in the conference proceedings (albeit in Korean!). I think it would be really good if other people did produce similar devices. I will pass your comments on to Mr. Minato. He did have a Web page, (in Japanese) with information on it, but I haven't been able to connect to it recently. Thanks again for your mail. Regards,
David Heard, Vice Chairman, STAG

At 02:46 21/11/97 -0800, you wrote:
Hello from Texas! A friend told me he saw the bicycle wheel version at a Korean conference so I posted all the details at KeelyNet...one of our readers found your site and informed me, so I will put up a link to your photos.... Do you think there will be full details on how to build the simple self-running bicycle version posted so that others can duplicate it....this would really set it off if these things were being shown all over the world.... I got copies of the three patents (two by Minato, one by Gavaletz) and have their locations posted on my page....thanks for providing the pictures....I don't think it go bigtime until at least a simplified version that self-runs has beend duplicated by many others....this will set the fire that will draw attention to the rest.....good luck, I and a lot of others will be watching....and please congratulate Mr. Minato on his achievement....if you would like to check out our site; http://www.keelynet.com/index0.htm

http://www.keelynet.com/gravity/curtis.htm (the device file)
Jerry W. Decker / jdecker@keelynet.com
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From: **Michael Randall --** mailto:mrandall@earthlink.net **~ *To:* Bill Beaty (www.eskimo.com) ~ December 4, 1997**

"Minato is going Big-Time!"

Subject: Minato's PPM Update Vortexians: Here is an update on Kohei Minato's over-unity permanent magnet inventions. Minato is currently having manufactured, over in Japan, a large unit, (4) connected 10 foot long units, that can power 30 homes. It is estimated to be finished by February. CNN is scheduled to report on it when ready. Minato also has a home powering unit. Both size units are based on his USA Patent 5,594,289 that uses a battery to start and stop the unit. The USA sales representative is Bob Vermillion and his e-mail address is: polenetic@aol.com

No web site yet but Bob Vermillion's office is in Century City, California and he said he can answer your technical, marketing, and manufacturing questions. He just came back from visiting Minato's lab in Japan and was impressed seeing the units working versus seeing the photo's. A power demonstration unit to is expected to arrive from Japan in January. There currently is no USA manufacturing being done and licenses are available worldwide. I mentioned to Bob that there is also a large interest for a permanent magnet rotor/stator unit that is self-rotating and self-starting, like Minato's bicycle wheel design. I also mentioned that a table top version of this, for the student or as an "executive toy," would sell quite well. He didn't know this. If any of you do e-mail to Bob for info, mention to him about the need for a table top version of the bicycle wheel and where you got his address!

Regards,
Michael Randall

From: Michael Randall ~ To: freenrg-l@eskimo.com (Bill Beaty), March 4, 1998 ~

"Minato Demo and Update"

Here is an 3/4/98 update on Kohei Minato's over-unity permanent magnet inventions from his USA sales representative's Bob Vermillion and John Kenworthy. Mr. Minato demonstrated at the Japanese "Energy Expo '98" his large unit, (4) connected 10 foot long units that can power 30 homes, and several smaller table top units. CNN, NHK and other TV networks took video's of his devices, and of the whole Expo, but he did not know when it was re-broadcasted. Minato's staff had their own video on for the four day event and Bob is making copies of a typical single day video coverage. There were not any instruments connected to the large unit to measure energy input to output but his table top unit was connected and it showed 48 Watts input to 550 Watts output. Minato's demonstration attracted a lot of public attention by the large daily crowds and also from a number of interested Japanese corporations. Bob said he received all of your e-mail's and took them back with him to Japan and gave a copy to Mr. Minato and his staff to show the interest here in the USA and the world. He has not replied to all of your e-mail's due to there is nothing to report about just yet and he will answer all of your e-mail's when he has at least a demonstration unit to show. They are still waiting for a table top power demonstration unit for their Los Angeles office but the Japanese engineer's want to perfect it first. Bob is looking forward to receiving a magnetic "bicycle wheel" unit in April and interested parties can then schedule an appointment to see the wheel spinning by itself without any energy input! :-)

Regards,
Michael Randall

New Energy News 6(3): 1 (July 1998): Press Release
Institute for New Energy (INE)

"The Magnetic Rotating Apparatus"

[If the following Press Release is reporting factual information that can be verified, then this may be the first commercial over-unity rotating, magnetic new-energy device. The first western hemisphere demonstration will be given in Mexico City in early July, 1998.

Inventor Kohei Minato, the Thomas Edison of the new millennium, has acquired more than 50 patents and intellectual property rights from all over the world for the energy creating "Magnetic Rotating Apparatus." Mr. Minato's generating device utilizes the magnetic force of repulsion to create and emerge clean safe energy.

The "Magnetic Rotating Apparatus" employs a number of stationary neodymium magnets arranged at regular intervals on the peripheral portion of a rotor. The polarity of each magnet, which is located radially outward from the rotor, is identical. The machine is started with an electromagnetic stator. When activated, the magnetic fields repel creating rotation of the rotor. As the rotations per minute (rpm's) increase, the electrical consumption to the electromagnetic stator decreases. This phenomenon is in direct conflict with accepted laws of physics and is achieved through the repelling magnetic fields. It operates without heat, noise or pollution of any kind. It can be produced in size from ultra small to very large.

One of the prototypes available for viewing operates with an input of 34 watts of electricity and outputs a maximum of 500 watts. "Magnetic Rotating Apparatus" applications currently under development include usage from cell phones and laptop computers to automobiles and giant power stations.

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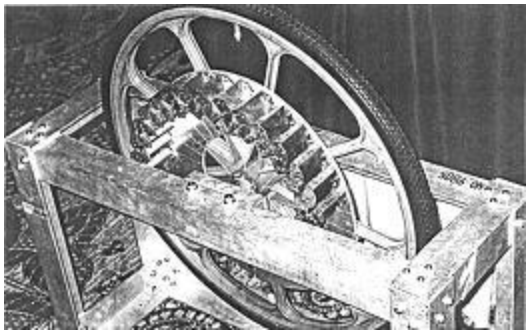
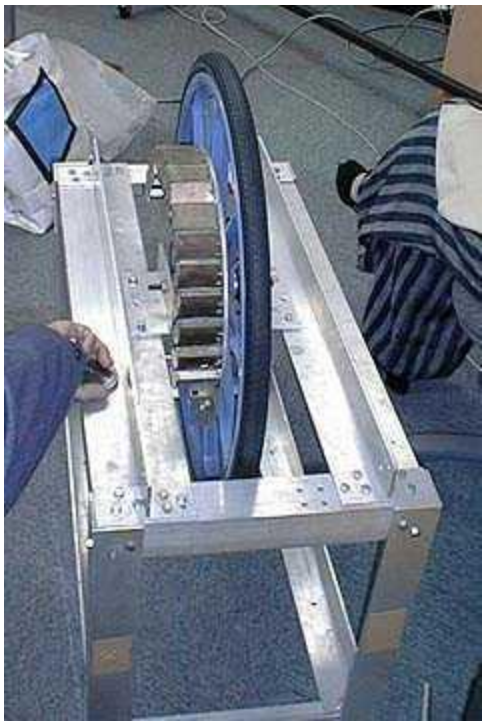
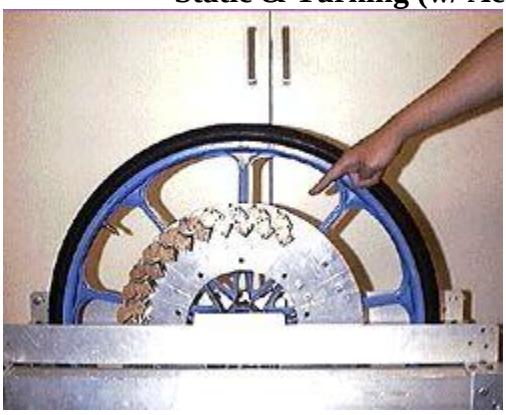
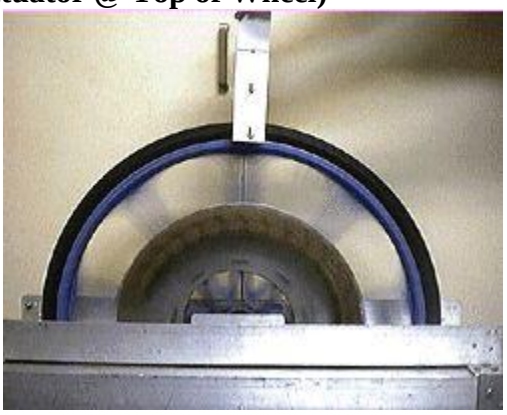
Minato Magnet Motor Bicycle Wheel Demonstration Model





Static & Turning (w/ Actuator @ Top of Wheel)





Gene MOLLINET

Power Unit (LEM#3)

***Goleta Sun* (CA), 1984**

Gene's Machine

by

Russ Spencer

As Gene Mollinet sits patiently working away in his shop, cars rumble by outside spewing exhaust the machine he has developed may someday make a thing of the past.

Elsewhere, officials and county planners sit in plush board rooms bickering over the size and number of oil rigs they'll soon add to the string already snaking down the Santa Barbara Channel. Still, Mollinet works, the machine taking shape among the Goleta inventor's clutter. He looks up, his Maui-tanned skin wrinkled from squinting at the tiny electrical parts and wires which make up his machine. His shirt, well, it's a mess. His hair, it's a mess too. Unkempt, with little education beyond high school --- he's a stereotypical inventor. Mollinet has a hard time explaining to someone as poorly versed in electronics as I am exactly what he is building or how it works.

The machine, he says, makes useable electric energy without using any fuel. It is as simple as that. It is started with a regular car battery, but after the battery is unhooked, the "Power Unit" keeps running until he turns it of. It is called LEM3, and he plans to put it in a plane and show the world what it can do by taking a 5-day spin around the world using no fuel.

A bit far-fetched? Mollinet is dead serious. The invention has a patent pending, and LEM3 development corporation was formed in 1982, and a batch of California capital stock has been sold. What's more, Mollinet says he is not the only one with the fuel-free idea. He claims that about 10 other inventors across the country are also racing to develop similar use of energy created through the magic contained within a magnetic field --- the same magic that fascinates every child who has ever picked up a magnet and wondered about its invisible attraction when held near a refrigerator.

Mollinet never lost that fascination, which heightened as he was flying P51s for the Air Force during the Korean War. He pulled apart a plane radio one day, and received a strange shock from one of the crystals used to latch onto radio frequencies. The crystal, e surmised in all innocence, was either storing energy or building its own. Coupled with a magnetic field, similar crystal substances will be used by Mollinet to keep the plane itself in the air, and without using any fuel.

[N.B.: I was told that Mollinet used a junction of Pb-FeS in a magnetic field to produce power after initial excitation by a battery. --- R. N.]

In addition to the plane unit on which Mollinet is currently working, he has already completed a solid state electrical generator which powers a car, and a mechanical home generator. He bets his bottom dollar on the plane, though.

The grand plan is to go to Stead Air Force Base in Nevada where the corporation has leased a hanger, and spend the month of January modifying a Cessna 152 fuselage to house the LEM3.

By spring, Mollinet says, the plane will be ready for an air flight which could revolutionize the entire power production field.

Mollinet admits all of this seems a bit strange. As every high school physics student has learned, the laws of thermodynamics say a machine cannot under any circumstances create more energy than it uses. So what gives? “It doesn’t deny those laws”, he says, “it adds to them”.

For obvious reasons, Mollinet won’t say a whole lot about what it does add to physical laws. What he does say is that it something to do with gyroscopic particles which orbit in a magnetic field to produce electricity [N.B.: compare Joe Newman’s gyroscopic theory. --- R.N.]. In the plane’s power unit, the electricity produced will be used to build up pressure in a hydraulic generator which turns the propeller. That’s it.

From under a pile of blueprints and aviation magazines Mollinet pulls out a San Francisco Examiner article from November about a man with a similar power unit [N.B.: Probably Joe Newman]. The man has been turned down by the US Patent Office for a patent on a machine similar to Mollinet’s “I’m way ahead of this guy”, Mollinet says. “His machine is, well, it’s primitive”, he adds, telling the story of how he already secured a patent pending on his device two years ago by showing officials just blueprints and providing them with an explanation of his theory. “When I went in there at first, I myself only had a suspicion that it worked”, he said.

In the newspaper article, a Sperry Univac official is quoted as saying that “the future of the human race may be drastically uplifted by the large scale development of this invention”. Mollinet says he understands the implications of his machine, the changes it could bring, and he says that if he has his way, the world will also soon be dealing wit those implications. He insists his story will not end with an oil company buying out his product and shelving it. “This won’t be squashed”, he says.

“I’d personally like to see all the pollution gone. I’d like to see those ugly power poles out there gone, and I’d like to see the nuclear power plants tore down”, he says.

Understandably, Mollinet has a hard time getting people to accept the fact that he really does have a prototype unit which he uses to energize the television he watches. “People think how can a little guy in his shop in Goleta do it when all the big guys like Santa Barbara Research and Raytheon can’t do it?”, he says. “Compared to the immenseness of what we have, the public interest in this has been piss-poor”.

A show displaying Mollinet’s solid state home unit, the car and the mechanical generator was held in August at the Earl Warren Showgrounds. The show’s lighting and amplification were powered by the LEM3 unit. About 125 people showed up. He has received offers to buy his company, he said, but is waiting until after he makes the air flight --- until he proves undeniably that the unit does what he says.

The plane now sits in the Nevada hangar with its wings detached He is going to replace the wings’ fuel tanks with hydraulic fluid reservoirs, and with water tanks --- we’ve got to have something to drink up there for 5 days”, he says. After that comes the installation of the power

unit, and a small fan at the rear of the plane for power reciprocation. The test flights begin at the end of January. At that point he plans to embark on the trip already plotted out on a world map hanging on a cluttered wall of his workshop.

It all seems like a fairy tale, a fantasy of sorts, but Mollinet is all business as he pulls out the blueprints for the plane and the unit and explains everything in electrical jargon; he's dead serious when he hauls out his corporation papers and stock certificates explaining how the corporation was formed.

When he walks across his shop to a little metal box in the corner wit the words LEM3 Power Unit printed on it, hooks up the battery cables, flips a switch, unhooks the cables and then plugs in a television, and the picture flickers immediately to life, it's much easier to swallow.

At this point all one can do is stand there, and try to imagine the ramifications of such a machine and what it could do for us all.

Goleta Sun **(Tuesday, August 28, 1984), page 3**

Goleta Man Shows Invention

(Photos by Gerry Stassinos)

LOCAL

Goleta Man Shows Invention

Photos by Gerry Stassinos

Goleta inventor Gene Mollinet showed his LE M3 power unit to the public for the first time last week at the Earl Warren Showgrounds.

Over 150 people attended the event, viewing what Mollinet claims is a unit which puts out electrical power without using any fuel, and without giving off any exhaust.

Three versions of the unit were shown, one which powers a car, one which is mechanical and one which is solid state.

The solid state model, shown above, was used during the show to power a television set hooked up to a computer.

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